

5. DCE Infrastructure Thread (T1)

The following sections provide the detailed test procedures for each test case as described in Section 4.0.

5.1 Ir1 Infrastructure Thread (T1)

5.1.1 Systems Inspections (TC017.001)

Note: This test case is ongoing and the final version with complete results will be in the test report

Req. No.	Verification Steps	Location	Verified by:	Date
C-HRD-11115	Examine the vendor documentation to make sure that the Unix operating system for the EMS processor is POSIX IEEE 1003.1 compliant.			
C-HRD-11300	Examine the documentation of the EMS data storage to verify it can run on operating systems from several POSIX compliant vendors.			
C-HRD-12115	Examine the vendor documentation to make sure that the Unix operating system for the LMS processor is POSIX IEEE 1003.1 compliant.			
C-HRD-12300	Examine the documentation of the LMS data storage to verify it can run on operating systems from several POSIX compliant vendors.			
C-HRD-18000	Ensure that the EMS backup system is backing up the software within the time interval guideline. Compare the logs with the time specified in the guidelines. Verify that this is in a physically separate location.			
C-HRD-18005	Ensure that the LMS backup system is backing up the software within the time interval guideline. Compare the logs with the time specified in the guidelines. Verify that this is in a physically separate location.			
C-HRD-21115	Examine the vendor documentation to make sure that the Unix operating system for the ECS processor is POSIX IEEE 1003.1 compliant.			
C-HRD-21300	Examine the documentation of the ECS data storage to verify it can run on operating systems from several POSIX compliant vendors.			
C-HRD-23115	Examine the vendor documentation to make sure that the Bulletin Board Server processor is POSIX IEEE 1003.1 compliant.			

C-HRD-23300	Examine the documentation of the Bulletin Board Server data storage to verify it can run on operating systems from several POSIX compliant vendors.			
C-HRD-28000	Ensure that the CSS-DCHCI Enterprise Communications Server backup system is backing up the software within the time interval guideline. Compare the logs with the time specified in the guidelines. Verify that this is in a physically separate location.			
C-HRD-32000	Examine the vendor documentation to make the ISS physical devices and Medium Access protocols are compatible with the following standards: a. IEEE 802.2 (Logical Link Control) b. IEEE 802.3 (MAC for Ethernet) c. IEEE 802.6 (MAC for SMDS) d. ANSI X3T9.5 (MAC for FDDI)			
C-HRD-32010	Examine the documentation for the ISS devices and protocols to verify that it states that the SNMP can monitor them. Bring up a single device to determine if SNMP can monitor that device. Repeat this for several different devices and protocols.	EDF	DH	11/16/95
C-HRD-41000	Ensure that the EDF Enterprise Monitoring Server is configured with a.) two fixed disks, b.) one tape drive, c.) one CD-Rom drive, d.) storage cross-strapped with the Enterprise Communications Server.	EDF	DH* A and C verified B and D Rel. A req. per EDS	11/16/95
C-HRD-41005	Ensure that the EDF Enterprise Communications Server is configured with a.) two fixed disks, b.) one tape drive, c.) one CD-Rom drive, d.) storage cross-strapped with the Enterprise Monitoring Server.	EDF	DH* A and C verified B and D Rel. A req. per EDS	11/16/95
C-HRD-41010	Ensure that the Bulletin Board Server is equipped with a.) tape drive b.) CD-ROM drive.	EDF	DH* A is verified B is Rel A. req per EDS	11/16/95

C-HRD-41015	Ensure that 2 data storage units supporting RAID level 5 are provided (one for Enterprise Monitoring/Enterprise Communications and the other for the Bulletin Board Server).	EDF	DH* Rel A. req per EDS	11/16/95
C-HRD-41020	Ensure that there are 4 management workstations which can perform any EMC function.	EDF	DH	11/15/95
C-HRD-41025	Ensure that the EDF has a system printer.	EDF	DH	11/15/95
C-HRD-41500	Ensure that one EDF LAN exists to provide infrastructure for the EDF in the Ir-1 timeframe.	EDF	DH	11/16/95
C-HRD-42000	Ensure that the GSFC LMS is configured with two fixed disks, one tape drive, and one CD-Rom Drive.			
C-HRD-44000	Ensure that the MSFC LSM is configured with two fixed disks, one tape drive, and one CD-Rom drive.			
C-HRD-45000	Ensure that the LsRC LSM is configured with two fixed disks, one tape drive, and one CD-Rom drive.			
C-HRD-46000	Ensure that the EDC LSM is configured with two fixed disks, one tape drive, and one CD-Rom drive.			
C-MSS-10410	Examine the MSS documentation to determine if the MSS interacts with the CSS subsystems to exchange the data items specified in the ECS internal ICDs.	EDF	DH	11/16/95
C-MSS-70520	Verify that the MSS EMC Management Application Service has office automation support tools. Examine the documentation to verify that these tools provide instructions for recovery from detected security events.			
S-DPS-42720	Examine the documentation to ensure that the AITTL CI allows the operation staff to have teleconferences with the Science Software Developer staff and the ECS staff.	EDF	DH	11/16/95
S-DPS-60710	Examine the ECS Facilities Plan, and verify the electrical power requirements for the SPRHW CI equipment. Ensure that the equipment falls within those guidelines. If necessary, consult with a building engineer to assist with verification.	SITE ONLY		
S-DPS-60740	Examine the ECS Facilities Plan and verify the air conditioning requirements. Ensure that there is a permanent thermometer in the computer room. Ensure that the temperature remains within the range specified in the ECS facilities plan.	SITE ONLY		
S-DPS-60750	Determine the grounding requirements in the ECS Facilities Plan. Consult with maintenance staff to determine if these grounding requirements are being met.	SITE ONLY		
S-DPS-60760	Determine the fire alarm requirements in the ECS Facilities Plan. Consult with either maintenance or building engineers to determine if the fire alarm requirements are being met.	SITE ONLY		

S-DPS-60780	Determine the physical interface requirements between the SPRHW CI equipment and the facility in the ECS Facilities Plan. Consult with the building engineers determine if the physical interface requirements are being met.	SITE ONLY		
S-DPS-60790	Determine the requirement for the footprint size and the physical layout of the SPRHW equipment. Consult with appropriate personnel to determine if the footprint size and the physical layout meet the requirements specified in the ECS Facilities Plan.	SITE ONLY		
S-DPS-60910	Examine the SPRHW CI documentation to verify that it supports testing throughout the development cycle.	SITE ONLY		
S-DPS-60930	Determine which test tools are listed in the SDPS test tool matrix. Ensure that the SPRHW CI provide those tools.	EDF	DH	11/16/95
S-DPS-61171	Verify that the Science processing hardware system has a dynamic analyzer that will be able to check source code for memory leaks. Make sure that Casevision is installed	EDF	DH	11/15/95
S-DPS-61172	Verify that the Science processing hardware platform is POSIX.2 compliant. Ensure that at least one of the following languages are installed: a. C b. C++ c. FORTRAN 77 d. FORTRAN 90 Examine the processing documentation to verify that the language(s) used are POSIX.2 compliant.	EDF	DH	11/16/95
S-DPS-61175	Verify that each development environment is POSIX.2 compliant. Determine what are the ECS supported languages for SPRHW. Verify that each environment has an interactive source level debugger for ECS supported languages.	EDF	DH	11/16/95
S-DPS-61177	Ensure that the SPRHW supporting the AI&T with CERES S/W has an ADA development environment installed. Check either the log in the computer area or look at the latest version of the EDFmat.doc	EDF	DH	11/15/95
S-DPS-70070	Examine the documentation to verify that the AITHW CI has the capability for status monitoring.	EDF	DH	11/16/95
S-DPS-70110	Ensure that the operating system for each UNIX platform conforms to the POSIX.2 standard.	EDF	DH	11/16/95
S-DPS-70120	Verify that the following utilities exist on the AITHW platform: perl, emacs, gzip, tar, imake, prof, gprof, nm. Enter which <utility> to verify.	EDF	DH	11/15/95

S-DPS-70130	Ensure that these user portability utilities exist: man and vi . To check, just enter either man or vi .	EDF	DH	11/15/95
S-DPS-70140	Ensure that these software development utilities exist: make .	EDF	DH	11/15/95
S-DPS-70150	Ensure that these C-Language Development Utilities exist: lex and yacc .	EDF	DH	11/15/95
S-DPS-70160	Ensure that the following Unix shells are installed: C, Bourne and Korn. To verify, look at the vendor documentation. For C type which csh For Bourne type which sh For Korn shell type which ksh	EDF	DH	11/15/95
S-DPS-70180	Verify that the Algorithm integration and test hardware system has a dynamic analyzer that will be able to check source code for memory leaks.	EDF	DH	11/16/95
S-DPS-70183	Ensure that the AITHW CI POSIX.2 compliant platform contains on-line or printed documentation for each installed tool.	EDF	DH	11/16/95
S-DPS-70190	Ensure that the AITHW platform has at least one of these four languages installed: C, C++, FORTRAN 77, or FORTRAN 90. Check either the logs by the computer or the latest EDFmat.doc	EDF	DH	11/16/95
S-DPS-70220	Examine the AITHW documentation to verify that the POSIX.2 environment should be able to compile and link POSIX compliant source code.	EDF	DH	11/16/95
S-DPS-70240	Examine the vendor documentation to verify that the AITHW platform has a source level debugger for each language available.	EDF	DH	11/16/95
S-DPS-70250	Examine the documentation to verify that the AITHW development environment has a screen capture utility. Snapshot is available on the Sun's To check type which snapshot	EDF	DH	11/15/95
S-DPS-70260	Ensure that the AITHW CI includes a set of profiling tools which can measure the average and maximum: a. CPU time b. Memory usage c. Disk space usage of a process	EDF	DH	11/16/95
S-DPS-70310	Make sure that the AITHW platform can interface with other platforms through the LAN. Remotely log into the other platforms from the AITHW machine	EDF	DH	11/15/95
S-DPS-70710	Examine the ECS Facilities Plan to determine the electrical requirements for the AITHW. Determine if the AITHW meet these requirements (consult with the building engineer to help determine this if necessary).	SITE ONLY		
S-DPS-70740	Examine the ECS Facilities Plan to determine the air conditioning requirements for the AITHW. Ensure that there is a thermostat in the computer area. Determine if the AITHW meet these requirements.	SITE ONLY		

S-DPS-70750	Examine the ECS Facilities Plan to determine the grounding requirements for the AITHW. Determine if the AITHW meet these requirements (consult with the building engineer to help determine this if necessary).	SITE ONLY		
S-DPS-70760	Examine the ECS Facilities Plan to determine the fire alarm requirements for the AITHW. Determine if the AITHW meet these requirements (consult with the building engineer to help determine this if necessary).	SITE ONLY		
S-DPS-70780	Examine the ECS Facilities Plan to determine the physical interface requirements for the AITHW. Determine if the AITHW meet these requirements (consult with the building engineer or hardware maintenance to help determine this if necessary).	SITE ONLY		
S-DPS-70790	Examine the ECS Facilities Plan to determine the footprint size and physical layout requirements for the AITHW. Determine if the AITHW meet these requirements (consult with the building engineer or hardware maintenance to help determine this if necessary).	SITE ONLY		
S-INS-60430	Make sure that the ICLHW CI can interface with one or more LANs. Remotely log into the other platforms from the ICLHW machine	EDF	DH	11/16/95
S-INS-60510	Examine the ECS Facilities Plan to determine the electrical requirements for the ICLHW. Determine if the ICLHW meet these requirements (consult with the building engineer to help determine this if necessary).	SITE ONLY		
S-INS-60540	Examine the ECS Facilities Plan to determine the air conditioning requirements for the ICLHW. Ensure that there is a thermostat in the computer area. Determine if the ICLHW meet these requirements.	SITE ONLY		
S-INS-60550	Examine the ECS Facilities Plan to determine the grounding requirements for the ICLHW. Determine if the ICLHW meet these requirements (consult with the building engineer to help determine this if necessary).	SITE ONLY		
S-INS-60560	Examine the ECS Facilities Plan to determine the fire alarm requirements for the ICLHW. Determine if the ICLHW meet these requirements (consult with the building engineer to help determine this if necessary).	SITE ONLY		
S-INS-60580	Examine the ECS Facilities Plan to determine the physical interface requirements for the ICLHW. Determine if the ICLHW meet these requirements (consult with the building engineer or hardware maintenance to help determine this if necessary).	SITE ONLY		

S-INS-60590	Examine the ECS Facilities Plan to determine the footprint size and physical layout requirements for the ICLHW. Determine if the ICLHW meet these requirements (consult with the building engineer or hardware maintenance to help determine this if necessary).	SITE ONLY		
S-INS-60650	Examine the documentation to verify that the ICLHW CI has the capability for status monitoring.	BOTH		
S-INS-60810	Ensure that the operating system for each UNIX platform conforms to the POSIX.2 standard.	EDF	DH	11/16/95
S-INS-60820	Verify that the following utilities exist on the ICLHW platform: perl, emacs, gzip, tar, imake, prof, gprof, nm. Enter which <utility> to see if it exists.	BOTH		
S-INS-60830	Ensure that these user portability utilities exist: man and vi . To check, just enter either man or vi .	EDF	DH	11/15/95
S-INS-60840	Ensure that these software development utilities exist: make.	EDF	DH	11/15/95
S-INS-60850	Ensure that these C-Language Development Utilities exist: lex and yacc.	EDF	DH	11/15/95
S-INS-60860	Ensure that the following Unix shells are installed: C, Bourne and Korn. To verify, look at the vendor documentation. For C type which csh For Bourne type which sh For Korn type which ksh	EDF	DH	11/15/95
S-INS-60870	Ensure that the ICLHW CI POSIX.2 compliant platform contains on-line or printed documentation for each installed tool.	EDF	DH	11/16/95
S-INS-60880	Ensure that the ICLHW platform has at least one of these four languages installed: C, C++, FORTRAN 77, or FORTRAN 90. To verify check either the logs or the latest EDFmat.doc	EDF	DH	11/15/95
S-INS-60890	The POSIX.2 environment should be able to compile and link POSIX compliant source code. Acquire some code that is POSIX.2 compliant and run it.	EDF	DH	11/16/95
S-INS-60895	Examine the vendor documentation to verify that the ICLHW platform has a source-level debugger for each language available. Make sure that CASEVISION is installed	EDF	DH	11/16/95
EOSD0510#Ir1	Examine the documentation for the ECS to determine whether it can be tested during all phases of development.	EDF	DH	11/16/95
EOSD0730#Ir1	N/A Examine the documentation for the ECS to determine whether each ECS element is capable of verifying the fidelity of the ECS element interface to external entities at any time during the lifetime of the ECS.			
EOSD5020#Ir1	Acquire a list of the site architectures that will be supporting ECS. Examine the vendor specs and documentation of all the hardware, software and interfaces used, and check off whether each piece will work on all of the different site architectures.			
ESN-1350#Ir1	Examine the documentation to verify that the ESN LAN's physical devices are compatible with ISO and ANSI standards.			

SCF-0001#Ir1	Verify that the SCF is following the Data Production Software and SCF Standards and Guidelines (GSFC 423-16-01), focusing on Operating Systems, communications, email protocol, and windowing protocol requirements.			
SCF-0010#Ir1	Ensure that the SCF interface consists of an ESDIS approved computing platform. Verify that a C compiler is present. Verify that a FORTRAN compiler is present.			
SCF-0030#Ir1	Verify that the hard drive is large enough to hold all the data that will reside on the system (1 Gig, 2 Gig, or larger). Verify that the system has enough memory (at least 32 meg). Verify that the system is at least 32 bit architecture (64 bit may be necessary depending on the software requirements). Verify that the video card and monitor are adequate for any operation. Determine the maximum performance for any network equipment and software, whether it includes LANs, modems, T1 lines, Mosiac, any internet software, etc. and whether it is enough to be able to access any outside entity.			
SMC-2505#Ir1	Examine the LSM operating procedures to verify that there is a plan to update the system-wide database of all hardware, system software, and scientific software. Determine how often this is done. Ascertain when was the last time this was done by looking at the LSM logbooks.			
TRMM1230#Ir1	Examine the CERES instrument team documentation to verify the definition of ancillary, correlative and flight dynamics data needed for their processing. Ensure that this info is either on-line (BBS, EDHS site, or other) or hardcopies are available.			
TRMM1240#Ir1	Examine the CERES instrument team documentation to verify the definition of quick-look algorithms and operations concept needed for their processing. Ensure that this info is either on-line (BBS, EDHS site, or other) or hardcopies are available.			
TRMM2220#Ir1	Examine the LIS instrument team documentation to verify the definition of ancillary, correlative and flight dynamics data needed for their processing. Ensure that this info is either on-line (BBS, EDHS site, or other) or hardcopies are available.			
TRMM2230#Ir1	Examine the LIS instrument team documentation to verify the definition of quick-look algorithms and operations concept needed for their processing. Ensure that this info is either on-line (BBS, EDHS site, or other) or hardcopies are available.			

5.1.2 User Authentication Test Procedures (TC003.001)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Perform a Unix login at an lr1 host machine.	Valid login.	
2	Capture network packet transmission via network analyzer.		Save captured frame data onto disk for analysis.
3	Enter: dce_login <username> on DCE host at EDF.	" Password : " will be displayed on the screen.	
4	Enter a valid password.	The password should not be readable. Successful login.	
5	Enter: klist	Valid ticket established.	View successful DCE authentication (print klist output to file).
6	Verify that DCE passwords were not sent in the clear.		Analyze packets captured by network analyzer.
7	Enter: kdestroy	DCE logout.	
8	Enter: klist	No DCE identity will be available.	
9	Enter: logoff	Unix logout.	
10	Repeat steps 2 through 9 for two more valid accounts (including the "guest" account).		

5.1.3 Failed User Authentication Test Procedures (TC003.002)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Enter valid username and invalid password as follows: login <username> password <invalid password> Attempt login 5 times. Verify logon terminates after 5 unsuccessful attempts.	Unsuccessful UNIX login.	For test purposes logon termination shall be set at 5 failed attempts.
2	Enter invalid username and valid password as follows: login <invalid username> password <password> Attempt login 5 times. Verify logon terminates after 5 unsuccessful attempts.	Unsuccessful UNIX login.	
3	Enter invalid username and invalid password as follows: login <invalid username> password <invalid password> Attempt login 5 times. Verify logon terminates after 5 unsuccessful attempts.	Unsuccessful UNIX login.	
4	Enter Null username as follows: login <return>	Unsuccessful UNIX login (no password prompt).	
5	Enter valid username and Null password as follows: login <username> password <return> Attempt login 3 times. Verify logon terminates after 3 unsuccessful attempts.	Unsuccessful UNIX login.	
6	Capture network packet transmission via network analyzer.		

7	Attempt DCE login using a valid username and invalid password as follows: dce_login <username> password <invalid password>	Password validation failure.	
8	Enter: klist	Failed DCE login.	
9	Attempt DCE login using a invalid username. dce_login <invalid username>	Unsuccessful DCE login (no password prompt).	
10	Enter: klist	No DCE identity will be available.	
11	Complete DCE login using a Null username. dce_login <return>	User ID failure (no password prompt).	
12	Enter: klist	No DCE identity will be available.	
13	Complete DCE login using a valid username and Null password dce_login <valid username> password <return>	Password validation failure.	
14	Enter: klist	No DCE identity will be available.	
15	Verify that DCE passwords were not sent in the clear.		Analyze packets captured by network analyzer.

5.1.4 User Password Change Test Procedures (TC003.003)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Complete DCE login using a valid username and valid password. dce_login <username> password <password>	Successful login.	
2	Enter: klist	Valid ticket established.	View successful DCE authentication (print klist output to file).
3	Enter: rgy_edit	Brings up DCE registry edit tool.	
4	Enter: do a	Changes current domain to the account domain.	
5	Enter: v <username>	View of user's DCE account attributes is displayed.	This information will be needed for the next step.
6	Enter: c -p <principalname> -g <groupname> -o <orgname> -pw <newpasswd> -mp <oldpasswd>	The principal's DCE login password has now been changed.	The principal name is the same as the user name in this case.
7	Enter: exit	Exits rgy_edit.	
8	Enter: kdestroy	Destroys DCE ticket.	
9	Enter: klist	No DCE identity will be available.	
10	Enter: exit	Exits DCE.	
11	Attempt DCE login using the above username and old password. dce_login <username> password <old password>	Password validation failure.	
12	Enter: klist	No DCE identity will be available.	
13	Complete DCE login using the above username and new password. dce_login <username> password <new password>	Successful login.	
14	Enter: klist	Valid ticket established	View successful DCE authentication
15	Enter: kdestroy	Destroys DCE ticket.	
16	Enter: klist	No DCE identity will be available.	
17	Enter: exit	Exits DCE.	
18	Enter: logout	Successful logoff.	

5.1.5 User Password Reset Test Procedures (TC003.004)

Step No.	Step Description / Operator Action	Expected Results	Observations / Comments
1	Complete DCE login on an Ir1 DCE Host in the EDF as a DCE administrator. dce_login <adminID> password <adminpasswd>	Successful login.	A DCE administrator will logon to change a user's password.
2	Enter: klist	Valid admin. ticket established.	View successful DCE authentication (print klist output to file).
3	Enter: rgy_edit	Brings up DCE registry edit tool.	
4	Enter: do a	Changes current domain to the account domain.	
5	Enter: v <username>	View of user's DCE account attributes is displayed.	This information will be needed for the next step.
6	Enter: c -p <principalname> -g <groupname> -o <orgname> -pw <userpass2> -mp <adminpasswd>	The principal's DCE login password has now been changed.	The principal name is the same as the user name in this case.
7	Enter: exit	Exits rgy_edit.	
8	Enter: kdestroy	Destroys DCE ticket.	
9	Enter: klist	No DCE identity will be available.	
10	Enter: exit	Exits DCE.	
11	Login as the DCE user whose password was changed above, using the new password (userpass2). dce_login <username> password <userpass2>	Successful login.	John will logon to change the user's password.
12	Enter: klist	Valid ticket established.	View successful DCE authentication (print klist output to file).
13	Enter: rgy_edit	Brings up DCE registry edit tool.	
14	Enter: do a	Changes current domain to the account domain.	
15	Enter: v <username>	View of user's DCE account attributes is displayed.	This information will be needed for the next step.

16	Enter: c -p <principalname> -g <groupname> -o <orgname> -pw <userpass3> -mp <userpass2>	The principal's DCE login password has now been changed.	The principal name is the same as the user name in this case.
17	Enter: exit	Exits rgy_edit.	
18	Enter: kdestroy	Destroys DCE ticket.	
19	Enter: klist	No DCE identity will be available.	
20	Enter: exit	Exits DCE.	
21	Attempt DCE login using the above username and original password (password prior to admin. change). dce_login <username> password <userpass1>	Password validation failure.	
22	Enter: klist	No DCE identity will be available.	
23	Attempt DCE login using the above username and the password which was changed using the DCE admin. account (password following admin. change). dce_login <username> password <userpass2>	Password validation failure.	
24	Enter: klist	No DCE identity will be available.	
25	Login as the DCE user above, using the new password (userpass3). dce_login <username> password <userpass3>	Successful login.	
26	Enter: klist	Valid ticket established.	View successful DCE authentication (print klist output to file).
27	Enter: kdestroy	Destroys DCE ticket.	
28	Enter: klist	No DCE identity will be available.	
29	Enter: exit	Exits DCE.	
30	Enter: logout	Successful logoff.	

5.1.6 Security Registry Maintenance Test Procedures (TC003.005)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Login to an Ir1 DCE Host in the EDF. Log into DCE as a DCE cell administrator.		Save all I/O to a log file.
2	Enter: rgy_edit	Brings up DCE registry edit tool.	
3	Enter: do g	Changes current domain to the group domain.	
4	Enter: v <username> Note: Select any valid user, other than DCE cell admin.	View of the user's DCE groups is displayed.	This information will be needed for the next step.
5	Enter: member <group_name> -a <username> Note: Select any valid group name, other than the one shown in step 4.	This will add the user to a new group.	
6	Enter: v <group_name> -m Note: The group_name should be the same one used in step 5.	The total number of members, with names, in the specified group, will be displayed, including the new user added above.	
7	Enter: member <group_name> -r <username> Note: Select the group name and user that were used in step 5.	This will remove the user from the group.	
8	Enter: v <group_name> -m Note: The group name should be the same one used above.	The total number of members should have decremented by one, and the above user name should now be deleted.	
9	Enter: do org	Changes current domain to the organization domain.	
10	Enter: v <username> Note: Select the same user as above.	View of the user's DCE organizations is displayed.	This information will be needed for the next step.
11	Enter: member <org> -a <username> Note: Select any valid organization name, other than the one shown in step 10.	This will add the user to a new organization.	

12	Enter: v <org> -m Note: The organization should be the same one used in step 11.	The total number of members, with names, in the specified organization, will be displayed, including the new user added above.	
13	Enter: member <org> -r <username> Note: Select the organization name and user that were used in step 11.	This will remove the user from the organization.	
14	Enter: v <org> -m Note: The organization name should be the same one used above.	The total number of members should have decremented by one, and the above user name should now be deleted.	
15	Enter: exit	Exits rgy_edit.	
16	Enter: kdestroy	Destroys DCE ticket.	
17	Enter: klist	No DCE identity will be available.	
18	Enter: exit	Exits DCE.	
19	Complete DCE login as the user from above. Enter: dce_login <userid> <password>	Successful DCE login.	
20	Enter: rgy_edit	Brings up DCE registry edit tool.	
21	Enter: do g	Changes current domain to the group domain.	
22	Enter: member <group_name> -a <username> Note: Select any valid group name, other than the one shown in step 4.	Error message.	
23	Enter: v <group_name> -m Note: The group name should be the same one used in step 22.	Same as in step 8.	
24	Enter: do org	Changes current domain to the organization domain.	
25	Enter: member <org> -a <username> Note: Select any valid organization name, other than the one shown in step 10.	Error message.	
26	Enter: v <org> -m Note: The organization should be the same one used in step 25.	Same as in step 14.	
27	Enter: exit	Exits rgy_edit.	

28	Enter: kdestroy	Destroys DCE ticket.	
29	Enter: klist	No DCE identity will be available.	
30	Enter: exit	Exits DCE.	
31	Logout		

5.1.7 Security Privilege Test Procedures (TC003.006)

Step No.	Step Description / Operator Action	Expected Results	Observations / Comments
1	Perform a Unix login at an Ir1 host machine for user1.	Valid logon.	This test does not pertain to DCE, only to Unix. User 1 & 2 should not have access to the same group files.
2	Enter: pwd	The path name of the current working directory will be displayed.	This will demonstrate the file/directory and user functions that are allowed user # 1.
3	Enter: ls -l	A list of files with permissions will be displayed.	
4	Enter: cd /<remote directory>/<remote sub directory>		
5	Enter: pwd	The path name of the current working directory will be displayed.	
6	Enter: ls -l	A list of files with permissions will be displayed.	
7	Enter: more <file name> and hit the space bar until the end of the file.	The file will be displayed on the screen.	
8	Enter: vi <file name>		
9	Modify the file.	The file will be modified.	
10	Enter: :wq	The modification to the file will be saved.	
11	Enter: cp /<file name> /<local directory>/<file name>	The file located at remote site will be copied to the local site.	
12	Enter: su <user2> , then enter valid password.	Successful super-user login as user2.	
13	Enter: cd /<user1 local directory>	Change to user1's local dir.	
14	Enter: ls -l	A list of files with permissions will be displayed.	
15	Enter: cd <subdirectory> Note: The selected subdirectory should have only owner permissions set.	A "Permission denied" error message should be displayed.	
16	Enter: cd <subdirectory> Note: The selected subdirectory should have all owner and only group/other read permissions set.	Access allowed.	

17	Enter: ls -l	A list of files with permissions will be displayed.	
18	Enter: vi <filename> Note: The selected file should have all owner and only group/other read permissions set.	The file will open.	
19	Modify the file.	Modifications prior to a write command will appear normal.	
20	Enter: :wq	A "File is read only" message will be displayed.	
21	Enter: :quit!	Exits vi editor.	
22	Enter: cd ..	Change to user1's local dir.	
23	Enter: mkdir TEST_DIR	A "Permission denied" message should be displayed.	
24	Enter: exit	Terminates user2 login.	
25	Enter: logout	Terminates user1 login.	

5.1.8 Server Authentication Test Procedures (TC003.007)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Start up an Ir1 DCE cell server in the EDF.	The server will be up and running.	
2	Setup a network analyzer to capture data going back and forth from that server.		
3	Logon as a dce_cell administrator at EDF. Enter: dce_login <adminID> Enter: <adminpasswd>	Successful logon.	
4	Enter: klist	Valid ticket established.	Analyze packets captured by network analyzer to ensure that the password was scrambled before it was sent to the security server.
5	Enter: kdestroy	Destroys DCE ticket.	
6	Enter: klist	No DCE identity will be available.	
7	Enter: exit	Exits DCE.	
8	Enter: logout	Successful logoff.	
9	Repeat steps 3 through 8 on two other platforms in the DCE cell, using two other DCE accounts.	See steps 3 through 8.	

Notes: This test is DCE oriented (not UNIX based)

5.1.9 Authentication Expiration Test Procedures (TC003.008)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Perform a Unix login at an lr1 host machine for user1.	Valid logon.	This test verifies that authentication tickets granted to users and processes expire in the configured time.
2	Enter: script <filename>	All input and output to screen is saved in this history log file.	
3	Logon as a dce_cell administrator at EDF. Enter: dce_login <adminID> Enter: <adminpasswd>	Successful logon.	
4	Enter: klist	Ticket information will be displayed on the screen.	
5	Enter: kinit -l <time (1 hour)> <adminID>	The ticket expiration time parameter will be set to one hour.	
6	Enter: klist	New ticket information will be displayed on the screen.	
7	Wait until the ticket expires (1 hour).		
8	Enter: klist	"group name unknown" is displayed, and no client/server ticket information will be displayed	
9	Enter: rgy_edit	DCE registry edit tool comes up, and "Warning-binding is not authenticated" is displayed.	
10	Enter: do a	Changes current domain to the account domain.	
11	Enter: c -p <adminID> -g <groupname> -o <orgname> -pw <newadminpasswd> -mp <adminpasswd>	"Unable to change password" is displayed.	
12	Enter: exit	Exits rgy_edit.	
13	Enter: kdestroy	Destroys DCE ticket remnants.	
14	Enter: klist	No DCE identity will be available.	
15	Enter: exit	Exits DCE.	
16	Enter: ctrl-D to halt the script command (stop recording activities).	The history log is now available for analysis.	

5.1.10 Local Logons Test Procedures (B01.01.01)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Perform a Unix login at an Ir1 host machine (H1) for a valid user.	Successful login.	This test verifies the connectivity between local host (H1) and local host (H2), connected via a local area network.
2	Enter: script <filename>	All input and output to screen is saved in this history log file.	
3	Capture network packet transmission via network analyzer.		Save captured frame data onto disk for analysis.
4	From H1, remotely log into (rlogin) H2 as the same valid user.	Successful rlogin at H2 for valid user. H2 prompt is displayed.	Successful connection from valid account on H1 to H2 (local) host.
5	Enter: logout	"Connection closed" is displayed. Prompt is now for H1.	
6	From H1, attempt to remotely log into (rlogin) H2 with an invalid username and valid password.	"UX:login: ERROR: Login incorrect" is displayed.	
7	From H1, attempt to remotely log into (rlogin) H2 with a valid username and an invalid password.	"UX:login: ERROR: Login incorrect" is displayed.	
8	Enter: ctrl-D to halt the script command (stop recording activities).	The history log is now available for analysis.	

5.1.11 Remote Logons (Telnet H1-H2-H3) - Valid and Invalid Test Procedures (B01.01.02)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Enter a valid Unix user name and a valid password for account A on H1 to log in.	Successful login on H1 for account A.	This test verifies that once connection to the system (H1), or any other local host (H2), is established, the user is able to log onto a remote host (H3), via basic LAN capabilities.
2	Capture network packet transmission via network analyzer.		Save captured frame data onto disk for analysis.
3	Enter: script <filename>	All input and output to screen is saved in this history log file.	
4	From H1, remotely log into (rlogin) H2 with a valid username and a valid password.	Successful rlogin to H2 for valid user. H2 prompt is displayed.	Successful connection from valid account on H1 to H2 (local) host.
5	From H2, remotely log into (telnet) H3 with a valid username and a valid password.	Successful telnet to H3 for valid user. H3 prompt is displayed.	Successful connection from valid account on H1 to H3 (remote) host, via H2.
6	Enter: logout	"Connection closed" is displayed. Prompt is now for H2.	
7	From H2, attempt to remotely log into (telnet) H3 with an invalid username and valid password.	"Login incorrect" is displayed.	
8	From H2, attempt to remotely log into (telnet) H3 with a valid username and an invalid password.	"Login incorrect" is displayed.	
9	Enter: logout	"Connection closed" is displayed. Prompt is now for H1.	
10	From H1, attempt to remotely log into (telnet) H3 with an invalid username and valid password.	"Login incorrect" is displayed.	
11	From H1, attempt to remotely log into (telnet) H3 with a valid username and an invalid password.	"Login incorrect" is displayed.	
12	From H1, remotely log into (telnet) H3 with a valid username and a valid password.	Successful telnet to H3 for valid user. H3 prompt is displayed.	Successful connection from valid account on H1 to H3 (remote) host.
13	Enter: logout	"Connection closed" is displayed. Prompt is now for H1.	
14	Enter: ctrl-D to halt the script command (stop recording activities).	The history log is now available for analysis.	

5.1.12 Remote Logons (Telnet H1-H3-H1) - Valid and Invalid Test Procedures (B01.01.03)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Enter a valid Unix user name and a valid password for account A on H1 to log in.	Successful login on H1 for account A.	This test verifies that once a connection to a remote host (H3) is made from a local host (H1), a user is able to log back into the local host (H1), via basic WAN capabilities. This test verifies that the connection into the LAN (NSI) from a WAN is possible.
2	Capture network packet transmission via network analyzer.		Save captured frame data onto disk for analysis.
3	Enter: script <filename>	All input and output to screen is saved in this history log file.	
4	From H1, remotely log into (telnet) H3 with a valid username and a valid password.	Successful telnet to H3 for valid user. H3 prompt is displayed.	Successful connection from valid account on H1 (local) to H3 (remote) host.
5	From H3, attempt to remotely log into (telnet) H1 with an invalid username and valid password.	"Login incorrect" is displayed.	
6	From H3, attempt to remotely log into (telnet) H1 with a valid username and an invalid password.	"Login incorrect" is displayed.	
7	From H3, remotely log into (rlogin) H1 with a valid username and a valid password.	Successful rlogin to H1 for valid user. H1 prompt is displayed.	Successful connection from valid account on H3 (remote) to H1 (local) host, via original H1 connection.
8	Enter: logout	"Connection closed" is displayed. Prompt is now for H3.	
9	Enter: logout	"Connection closed" is displayed. Prompt is now for H1.	
10	Enter: ctrl-D to halt the script command (stop recording activities).	The history log is now available for analysis.	

5.1.13 Syntax and Commands Simplification Test Procedures (TC011.001)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Log onto a development HP workstation.	Successful logon.	The purpose of this test case is to inspect those DCE-related documents and commands which incorporated the Ir1 online development environment .
2	Enter: cd /opt/dcelocal/hptools/doc/oodce	Directory changed.	
3	Enter: pg users_guide.ps to inspect the file "users_guide.ps" (programmer's guide).	Programmer's guide is displayed.	
4	Enter: cd /opt/dcelocal/usr/man Note: User can also add the following path to .cshrc: "setenv MANPATH /opt/dcelocal/usr/man:/usr/man:\$MANPATH".	Directory is changed.	
5	Enter : man <dce_command> to view DCE command info (e.g., klist, rgy_edit, dce_login, uuid_is_nil, whereis, etc.)	Information about the command is displayed on the screen.	
6	Log off of the workstation.	Successful logoff.	

5.1.14 Sample Object Implementation Test Procedures (TC011.002)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Log onto an HP workstation.	Successful logon.	
2	Click icon to open two hpterminals.	Two windows open.	
3	Enter: script TC1_14_log	Script starts.	
4	Enter: cd /opt/oodce/hpexamples/sleeper Note: This directory contains a DCE application called 'sleeper' on Baltic. It is a RPC sample application. which shows how to establish a binding to a remote server given only the host name on which the server is running. It uses explicit binding and contacts the endpoint mapper on the remote host to obtain a port number. There is one interface used, and one operation in the interface that takes a number of seconds to sleep, sleeps that long, and returns.	host{userid}xxx: will be displayed.	
5	Enter: ls -l	A detailed list of files is displayed.	
6	Enter: cp -R ./home/userid/dce	'host{userid}xxx:' will be displayed.	
7	Enter: cd	'home/userid' will be displayed, followed by 'host{userid}xxx:'	
8	Enter: cd dce	Directory changed.	
9	Enter: chmod 777 *	Change to executable.	
10	Enter: ls -l	A detailed list of files is displayed.	
11	Run the makefile that will call C++ files and OODCE files by entering: make Note: Compile on the Baltic platform (development processor).	OODCE and C++ source code will compile and link successfully.	
12	Enter: ls -l	A detailed list of files is displayed.	
13	Enter: ./sleeper_server from one window.	Start the server. The binding and listening will be displayed.	

14	Enter: ./sleeper_client <host name> <sleep time> from another window.	The client program will be invoked. This will cause a message to be printed by the server when the manager function is entered and when it returns. The client should indicate the call and return as well.	
15	CNTL D	The script will end.	
16	Print the script file as the status report.	The report will be printed.	
17	Log off of the workstation.	Successful logoff.	

5.1.15 Logoffs - Normal Test Procedures (B01.02.01)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Enter a valid Unix user name and a valid password for account A on H1 to log in.	Successful login on H1 for account A.	This test verifies that when a tester, using a valid account, logs off of a system or a host, the connection is properly closed.
2	Enter script <filename> to record input/output.	All input and output will be recorded.	
3	From H1, remotely log into (rlogin) H2 with a valid username and a valid password.	Successful rlogin to H2 for valid user. H2 prompt is displayed.	
4	From H2, remotely log into (telnet) H3 with a valid username and a valid password.	Successful telnet to H3 for valid user. H3 prompt is displayed.	
5	From H3, enter exit .	' H2(userID):' will be displayed.	
6	From H2, enter exit .	' H1(userID):' will be displayed.	
7	Enter ctrl-D to stop the recording script.	The recording will end.	
8	Enter: lpr -P<printer name> <file name>	The history log file will be printed.	Verify that all activities are recorded in the history log file.
9	Enter: logout	The tester will be logged off of all hosts.	

5.1.16 Logoffs - Abnormal Test Procedures (B01.02.02)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Enter a valid Unix user name and a valid password for account A on H1 to log in.	Successful login on H1 for account A.	This test verifies that when a tester, using a valid account, is logged into a system or a host and that machine is killed, the connection is properly closed.
2	Enter script <filename> to record input/output.	All input and output will be recorded.	
3	From H1, remotely log into (rlogin) H2 with a valid username and a valid password.	Successful rlogin to H2 for valid user. H2 prompt is displayed.	
4	From H2, remotely log into (telnet) H3 with a valid username and a valid password.	Successful telnet to H3 for valid user. H3 prompt is displayed.	
5	Turn off the H3 machine.	"Connection closed by foreign host" will be displayed, then the H2 prompt will appear.	
6	From H2, attempt to remotely log into (rlogin) H3 with a valid username and a valid password.	"Connection timed out" will be displayed, and the H2 prompt will remain.	
7	From a window on H1, use the Unix kill command to terminate the process which is associated with the rlogin to H2.	"Terminated," then "H1(userID):" will be displayed.	
8	Perform a Unix process status command (ps) to ensure that all processes associated with H2 and H3 have been terminated.	No processes related to H2 or H3 should be displayed.	
9	Turn on (power up) H3.	H3 should boot up properly.	
10	From H1, telnet to H3.	Ensure that the connection to H3 has been properly made.	
11	From H1, enter exit to log off of H3.	'H1(userID):' will be displayed.	
12	Enter ctrl-D to stop the recording script.	The recording will end.	
13	Enter: lpr -P<printer name> <file name>	The history log file will be printed.	Verify that all activities are recorded in the history log file.
14	Enter: logout	The tester will be logged off of all hosts.	

5.1.17 Login to EDF Test Procedures (T01-02.02.02.01)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Using a valid user name and a valid password, remotely log onto an AIT workstation at EDF from an off-site location.	AITWS(user name): will be displayed on the screen.	This test verifies that a user is able to successfully log onto a host machine within the EDF from an external location.
2	Enter script <filename> to record input/output.	All input and output will be recorded.	
3	Enter: who	All users, including the tester, logged on the workstation will be displayed.	
4	Enter ctrl-D to stop the recording script.	The recording will end.	
5	Enter: lpr -P<printer name> <file name>	The history log file will be printed.	Verify that all activities are recorded in the history log file.
6	Enter: logout	The tester will be logged off of all hosts.	

5.1.18 External Interfaces Integration Test Procedures (BC002.001)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Log onto the EDF DAAC Ingest Server workstation.	For in-house testing, the EDF DAAC Ingest Server will act as the Ingest Server for all DAACs.	The detailed external interfaces, accessed via the Gateway, can be seen in the Ir1 External Interface diagrams (one for the Data Server and one for Ingest), and they are covered by test cases 10.3 through 10.6, 11.3, and 11.4. The purpose of this test case is to demonstrate access to this interface.
2	Enter: cd /Ir1_IT/CSS/bin/sun5 Enter: Gateway 7777 &	Gateway should be initiated.	
3	Enter: ps -ef grep Gateway	One Gateway 7777 process is up and running.	
4	Enter: socketClient to start the test driver.	"Enter gateway server name:" is displayed.	
5	Enter: mss2sunedf.gsfc.nasa.gov , then select Enter .	"Enter port number" is displayed.	
6	Enter: 7777 , then select Enter .	"Selection Menu" is displayed.	
7	Select: "1" for Send Authentication Request.	"Enter usr name [DCE Principal Name]:" is displayed.	
8	Enter the DCE principal name.	"Enter password [DCE Password]:" is displayed.	
9	Enter the password for DCE.	"Authn Request msgtype;15 msgLen: xx" is displayed at the top of the screen.	
10	Select "2" for Read Authentication Request.	"msgtype:16 msgLength: xx " is displayed at the top of the screen.	
11	Select "11" to exit the test driver.		
12	Enter: ps -ef grep Gateway	Two Gateway processes are up and running.	
13	Enter: ls -l	A list of files is displayed.	

14	Enter: prtm OUT16	A dump of file OUT16 is displayed on the screen. Verify that the disposition value is "1", which means success ("2" means failure). Note: The destination and origin information are hard coded.	
15	Enter: "Y" to save the display file.	Display is saved in file OUT16_prt .	
16	Enter : mv OUT16_prt Aut_valid	Save the output file.	
17	Print Aut_valid.		
18	Repeat the steps 7 through 17, using an invalid password, and place the result in Aut_invalid .	Test invalid condition.	
19	Bring down Gateway, print out the logs, and log off of the workstation.		

5.2 Messaging and File Transfer Thread (T2)

5.2.1 Internet Utilities Test Procedures (TS002.014)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Log into the AI&T workstation.		
2	Type: Mosaic		
3	Select the "Open URL..." option from the "File" menu.		
4	Type: http://edhs1.gsfc.nasa.gov in the "URL To Open:" text box and then click on the "Open" button.	Verify that the EDHS page appears in the Mosaic window.	
5	Select the "Add Current To Hotlist" option from the "Navigate" menu.		
6	Select the "Hotlist..." option from the "Navigate" menu.	Verify that "The ECS Data Handling System (EDHS)" URL was added to the current hotlist.	
7	Click on the "The ECS Data Handling System (EDHS)" title, then click on the "Dismiss" button.		
8	Click on the "Quick Search on Documents" button under "SEARCH OPTIONS:"	Verify that the Quick Search WAIS index appears in the Mosaic window.	
9	Type: ICD in the "searchable index:" text box and then hit the "Enter" key.	Verify that a list of hypertext links to ICD's appears in the Mosaic window.	
10	Click on " ICD between ECS and Landsat 7 system "	An abstract of the specified document will be displayed on the screen.	
11	Go to the bottom of the document and click on "text"	The entire document will be displayed on the screen.	
12	Select the "Mail to..." option from the "File" menu.	A dialog box for mailing information will be displayed on the screen.	
13	Enter Internet address: <userid@eos.hitc.com> under Mail To and type ICD under subject. Click the Mail button.	The dialog box will disappear from the screen.	
14	Select the "Exit Program..." option from the "File" menu.	A 'Exit Confirmation' dialog box will be displayed.	

15	Click on " Yes " in the "Exit Confirmation" box.	Successful exit from Mosaic.	
16	Logon on the workstation using a userid specified in the internet address	Successful logon	
17	Enter: mail	The document sent via internet will be displayed on the screen followed by ?	
18	Enter: s <file name>	The document will be saved in the specified file name.	
19	Enter: q	Host(userid)xxx: will be displayed on the screen.	
20	Enter: exit	Successful logoff	

Notes: Assuming Mosaic will be the interface.

Verify type of Web browser used in Ir1 (Mosaic, Netscape, etc.)

Consider use of XRunner for recording such a session

5.2.2 Bulletin Board Test Procedures (BC012.004)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Enter: <login id> on the Bulletin Board Server workstation at the DAAC.	'Password' will be displayed	
2	Enter: <password>	'host name {user name}:' will be displayed	
3	Enter: xvnews &	Bulletin Board service initializes.	
4	Click on the 'view groups' button.	Many bulletin boards are displayed.	
5	Scroll down the bulletin board list and click on 'alt.activism.death-penalty' .	'alt.activism.death-penalty' is highlighted and is added to a list in the bottom window.	
6	Scroll down the bulletin board list and click on 'alt.alien.visitors' .	'alt.alien.visitors' is highlighted and is added to a list in the bottom window.	
7	Scroll down the bulletin board list and click on 'alt.animation.warner-bros' .	'alt.animation.warner-bros' is highlighted and is added to a list in the bottom window.	
8	Click on the 'subscribe' button.	The status is updated from 'unsubscribed' to 'subscribe'.	
9	Click on the 'done' button.	A list of the three bulletin boards that we subscribed to is displayed.	
10	Click on 'alt.alien.visitors' .	'alt.alien.visitors' is highlighted.	
11	Click on the 'read group' button.	A list of postings are displayed at the top of the window, with the first one being open in the bottom of the window.	
12	Click on any of the postings to open them or click on the 'next art' button to pull the next one.	The article is marked as 'read' as soon as it is opened.	Make a note of the articles that you read.
13	Click on the 'catchup' button with right button of the mouse and click on the 'up to selected article'		
14	With the right mouse button, click on the 'Post/E-mail' button, followed by 'Post follow up' .	A 'Post followup' window appears with a mail message to be posted back to the bulletin board.	
15	Click on the 'Cancel' button.	A confirmation window appears.	
16	Click on the 'Cancel Post' button.		
17	With the right mouse button, click on the 'Post/E-mail' button, followed by 'Reply to sender' .	A 'Reply to sender' window appears with a mail message to be sent back to the author.	
18	Click on the 'Cancel' button.	A confirmation window appears.	
19	Click on the 'Cancel Post' button.		

20	With the right mouse button, click on the 'Post/E-mail' button, followed by 'Forward article' .	A 'Forward article' window appears with a mail message to be sent to the addresses input.	
21	Click on the 'Cancel' button.	A confirmation window appears.	
22	Click on the 'Cancel Post' button.		
23	With the right mouse button, click on the 'Post/E-mail' button, followed by 'Post an article' .	A 'Post an article' window appears with a mail message to be posted to the bulletin board.	
24	Click on the 'Cancel' button.	A confirmation window appears.	
25	Click on the 'Cancel Post' button.		
26	Click on the 'done' button.	Returns to the list of subscribed bulletin boards.	
27	Click on the 'read group' button.	The list of postings is displayed but the articles noted in step #12 are missing.	
28	With the right mouse button, click on the 'save' button, followed by 'File...' .	A 'popup' window appears, asking for a filename.	
29	Enter: TC2.2_log	The message will be saved.	
30	Close the 'File Saver' window		
31	With the right mouse button, click on the 'search' button, followed by 'Search...' .	An 'Expression search' window appears.	
32	Enter a 'Search string' to search for and a header field.		A header field could be: 'from' - to search by author 'subject' - to search by subject 'article text' - to search the contents of the message
33	Click on the 'next' button to search forward or click on the 'prev' button to search backward.	If a match is found, the entry that it was found in will be displayed.	
34	Close the 'Expression search' window.		
35	Click on the 'done' button.	Returns to the list of subscribed bulletin boards.	
36	Click on the 'view groups' button.	Many bulletin boards are displayed.	
37	Scroll down the bulletin board list and click on 'alt.activism.death-penalty' .	'alt.activism.death-penalty' is highlighted and is added to a list in the bottom window.	
38	Scroll down the bulletin board list and click on 'alt.alien.visitors' .	'alt.alien.visitors' is highlighted and is added to a list in the bottom window.	
39	Scroll down the bulletin board list and click on 'alt.animation.warner-bros' .	'alt.animation.warner-bros' is highlighted and is added to a list in the bottom window.	

40	Click on the 'unsubscribe' button.	The status has updated from 'subscribe' to 'unsubscribed'.	
41	Click on the 'done' button.		
42	Click on the 'quit' button to close.	Exits bulletin board.	
43	Enter: <login id as adminstor> on the "newsroom"	'Password' will be displayed	You can also logon as "root" then you will not need to use 'sudo' command for the following steps
44	Enter: <password>	'host name {user name}:' will be displayed	
45	Enter: 'cd /usr/local/news/bin'		
46	Enter: sudo ./ctlinnd newgroup <alt.IR1.test>	'Password' will be displayed	"sudo" command will last for 5 minutes which means within 5 minutes after the first 'sudo' command is issued you will not be asked for password
47	Enter: <password>	'OK' will be displayed and new BB is created	
48	Enter: <login id> on the Bulletin Board Server workstation at the DAAC.	'Password' will be displayed	
49	Enter: <password>		
50	Enter: xvnews &	Bulletin board service initialized	
51	With the right mouse button, click on the 'Post' button, and post an article to the alt.IR1.test newsgroup	An article will be post in alt.IR1.test	
52	Click on the 'done' button.		
53	Click on the 'quit' button to close.	Exits bulletin board.	
54	Enter: cd /var/spool/news on newsroom	Dirctory changed	
55	Enter: ls -l	List of directories appeared	
56	Enter: cd alt	Directory changed	
57	Enter: ls -l	List of the subdirectories displayed	
58	Enter: cd IR1/test	Directory changed	
59	Enter: ls -l	List of the articles displayed	

60	Enter: copy <article id> /tmp/.	Backup the article from bulletin board	You can backup the whole bulletin board by using the same scheme, here is showing you the capability of backup
61	Enter: sudo rm <msg_id/article id>	'Password' will be displayed	
62	Enter: <password>	The article with the specified message_id will be removed from the local system.	
63	Enter: sudo ./ctlinnd rmgroup <alt.IR1.test>	'Password' will be displayed	
64	Enter: <password>	'OK' will be displayed and BB is deleted	
65	Enter: page /usr/local/news/history	History file is displayed.	History file logs all the incoming articles.
66	Enter: kill -9 <BB demon innd>	Force all the users off the bulletin board	
67	Enter: vi /usr/local/news/nnrp.access		Steps 61 - 66 is showing the capability of restricting user access
68	Enter: 192.150.28.116:RP::*, !alt.alien.visitors then out of the editor	This restricts host with IP address of 192.150.28.116 from accessing the alt.alien.visitors news group	
69	Enter: <login id> on the host of 192.150.28.116	"password" displayed	
70	Enter: <password>	'host name {user name}:' will be displayed	
71	Enter: xvnews &	Bulletin Board service initializes.	Verify that a message displayed on the command line indicating that the user is limited to access newsgroup alt.alien.visitors
72	Click on the 'done' button.		
73	Click on the 'quit' button to close.	Exits bulletin board.	
74	Exit the newsroom		

5.2.3 E-Mail Test Procedures (TC006.002)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Enter: login < userid at EDF> on the AIT Workstation at EDF.	'Enter Password:' will be displayed on the screen	In Ir-1 configuration each workstation may not have an individual mail server.
2	Enter: <password>	'host name {user name}:' will be displayed.	
3	Enter: mailtool&	The mailtool icon will be generated	
4	Move the cursor to the Mailtool icon and double click it.	The main panel of the mailtool will be displayed.	
5	Click the compose button with left button of the mouse	A panel for ' compose message ' will be displayed.	
6	Type the userid, Subject and another userid under Cc: and then type a message		
7	Click the File button with left button of the mouse at the bottom of the panel.	A panel for 'Add Attachment' will be displayed	
8	Select a file and click the ' Add ' on the ' Add attachment ' panel.	A panel for 'Add Attachment' will disappear.	
9	Click the Deliver button in the ' Compose Message '	A panel for ' Compose Message ' will disappear.	
10	Click File button with left button of the mouse	A mail message will appear in the list.	
11	Click the View button with the left button of the mouse	List of mail message will be displayed and the content of the message is also displayed in the "view message" panel	Ensure the content of the message is identical with what you typed
12	Move cursor in the "view message" panel and type in some changes to modify the file.	Message content is changed	
13	Click File button with right button of the mouse	A selection pane will appear.	
14	Click Save change button	Modification is saved	
15	Type a new file name follow Mail File: and click the Copy button with left button of the mouse to copy the mail message	A mail message will be copied in the specified file name.	
16	Click Reply button with left button of the mouse Note: default goes back to sender	A panel for ' Compose message ' will be displayed.	

17	Type the userid (if needed) and then type a reply message in the ' compose message ' panel.	A reply message is composed	
18	Click the Deliver button in the ' Compose Message '	A panel for ' Compose Message ' will disappear.	
19	Click File button with left button of the muse	A mail message will appear in the list.	
20	Click the View button with left button of the mouse (view the next message)	Another panel with complete mail message will be displayed.	
21	Type the file name follow Mail File: and click the Move button to move the mail message	A mail message will be moved in the specified file name and disappeared from the mail list	
22	Click the Delete button with left button of the mouse	The displayed message will be deleted	
23	Click the Done button with left button of the mouse to leave the mailtool	Get out of the mailtool	
24	Click the right button of mouse to have the root menu displayed and then click the 'Quit ' selection.	Confirmation to logout is asked.	
25	Click the 'Yes' button to confirm	Logged out.	

5.2.4 EDF to DAAC Message Transfer Test Procedures (TC010.001)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Enter: login <userid from EDF> on the AIT Workstation at EDF.	'Enter Password:' will be displayed on the screen	In Ir-1 configuration each workstation may not have an individual mail server.
2	Enter: <password>	'host name {user name}:' will be displayed.	
3	Enter: script TC2.4_log	Script started, file is TC2.4_log All I/O at this workstation will be recorded in this file	
4	Enter: mail <userid at GSFC@internet mail address> and hit enter key Note: use ' userid@ecsgsfc1.gsfc.nasa.gov ' for test	Enter the mail system and wait for the message text to be entered.	
5	Type the message text to send to GSFC	The entire message will be displayed on the screen.	
6	Type "." to send the message to GSFC.	'host name {user name}:' will be displayed.	
7	Enter: mail <userid at MSFC@internet mail address> Note: use ' userid@hydra.msfc.nasa.gov ' for test	Enter the mail system and wait for the message text to be entered.	
8	Type the message text to send to MSFC	The entire message will be displayed on the screen.	
9	Type "." to send the message to MSFC.	'host name {user name}:' will be displayed.	
10	Enter: mail <userid at LaRC@internet mail address> Note: use ' userid@ecs.larc.nasa.gov ' for test	Enter the mail system and wait for the message text to be entered.	
11	Type the message text to send to LaRC	The entire message will be displayed on the screen.	
12	Type "." to send the message to LaRC.	'host name {user name}:' will be displayed.	
13	Enter: mail <userid at EDC@internet mail address> Note: use ' userid@ecs-hp1.cr.usgs.gov ' for test	Enter the mail system and wait for the message text to be entered.	
14	Type the message text to send to EDC	The entire message will be displayed on the screen.	
15	Type "." to send the message to EDC.	'host name {user name}:' will be displayed.	

16	Enter: mail <userid at GSFC@internet mail address> <userid at MSFC@internet mail address> <userid at LaRC@internet mail address> <userid at EDC@internet mail address>	Enter the mail system and wait for the message text to be entered.	
17	Type the message text to distribute to all DAACs: GSFC, MSFC,LaRC and EDC	The entire message will be displayed on the screen.	
18	Type "." to send the message to all DAACs: GSFC, MSFC,LaRC and EDC	'host name {user name}:' will be displayed.	
19	Enter: rlogin <host name or ip address at GSFC> from the AIT workstation to GSFC.	'login:' will be displayed on the screen	
20	Enter: <password> to login	'host name {user name}:' will be displayed.	
21	Enter: mail Note: This will display mail messages received by this userid at GSFC.	A mail message will be displayed on the screen followed by '?'. 	
22	Hit enter key until the message sent from EDF is displayed on the screen	The message content is displayed	
23	Enter: s edf_dist_gsfc	The distributed message is saved	
24	Hit enter key until the message sent from EDF is displayed on the screen	The message content is displayed	
25	Enter: s edf_gsfc	The message is saved	
26	Enter: q , if necessary	'host name {user name}:' will be displayed.	
27	Enter: cat edf_gsfc.	The saved mail message will be displayed on the screen .	The mail message received by GSFC will be compared to verify that the message is not corrupted after being transferred.
28	Enter: cat edf_dist_gsfc.	The saved distributed mail message will be displayed on the screen .	The mail message received by GSFC will be compared to verify that the message is not corrupted after being transferred.
29	Enter: stty kill cntl-U	This is necessary, if you type @ sign will clear the previous typing	
30	Enter: mail <userid at EDF@internet mail address> and hit enter key Note: For Ir1 mail server, use dps1sgiedf.gsfc.nasa.gov	Enter the mail system and wait for the message text to be entered.	

31	Type the message text for acknowledgment to EDF	The entire message will be displayed on the screen.	
32	Type "." to send the message to EDF.	'host name {user name}:' will be displayed.	
33	Enter: rlogin <host name or ip address at MSFC> from the AIT workstation to MSFC	'login:' will be displayed on the screen	
34	Enter: <password> to login	'host name {user name}:' will be displayed.	
35	Enter: mail Note: This will display mail messages received by this userid at MSFC..	A mail message will be displayed on the screen followed by '?'. 	
36	Hit enter until the message sent from EDF is displayed on the screen	The message content is displayed	
37	Enter: s edf_dist_msfc	The distributed message is saved	
38	Hit enter until the message sent from EDF is displayed on the screen	The message content is displayed	
39	Enter: s edf_msfc	The message is saved	
40	Enter: q , if necessary	'host name {user name}:' will be displayed.	
41	Enter: cat edf_msfc	The saved message will be displayed on the screen.	The mail message received by MSFC will be compared to verify that the message is not corrupted after being transferred.
42	Enter: cat edf_dist_msfc	The saved distributed message will be displayed on the screen.	The mail message received by MSFC will be compared to verify that the message is not corrupted after being transferred.
43	Enter: mail <userid at EDF@internet mail address> Note: For Ir1 mail server, use dps1sgiedf.gsfc.nasa.gov	Enter the mail system and wait for the message text to be entered.	
44	Type the message text for acknowledgment to EDF followed by enter key.	The entire message will be displayed on the screen.	
45	Type "." to send the message to EDF.	'host name {user name}:' will be displayed.	
46	Enter: rlogin <host name or ip address at LaRC> from the AIT workstation to LaRC.	'login:' will be displayed on the screen	
47	Enter: <password> to login	'host name {user name}:' will be displayed.	

48	Enter: mail Note: This will display mail messages received by this userid at LaRC.	A mail message will be displayed on the screen followed by '?'. 	
49	Hit enter until the message sent from EDF is displayed on the screen	The message content is displayed	
50	Enter: s edf_dist_larc	The message is saved	
51	Hit enter until the message sent from EDF is displayed on the screen	The message content is displayed	
52	Enter: s edf_larc	The message is saved	
53	Enter: q , if necessary	'host name {user name}:' will be displayed.	
54	Enter: cat edf_larc	The saved message will be displayed on the screen.	The E-mail message received by LaRC will be compared to verify that the message is not corrupted after being transferred.
55	Enter: cat edf_dist_larc	The saved message will be displayed on the screen.	The E-mail message received by LaRC will be compared to verify that the message is not corrupted after being transferred.
56	Enter: mail <userid at EDF@internet mail address> Note: For Ir1 mail server, use dps1sgiedf.gsfc.nasa.gov	Enter the mail system and wait for the message text to be entered.	
57	Type the message text for acknowledgment to EDF	The entire message will be displayed on the screen.	
58	Type "." to send the message to EDF.	'host name {user name}:' will be displayed.	
59	Enter: rlogin <host name or ip address at EDC> from the AIT workstation to EDC.	'login:' will be displayed on the screen	
60	Enter: <password> to login	'host name {user name}:' will be displayed.	
61	Enter: mail Note: This will display mail messages received by this userid at EDC.	A mail message will be displayed on the screen followed by '?'. 	
62	Hit enter until the message sent from EDF is displayed on the screen	The message content is displayed	
63	Enter: s edf_dist_edc	The message is saved	

64	Hit enter until the message sent from EDF is displayed on the screen	The message content is displayed	
65	Enter: s edf_edc	The message is saved	
66	Enter: q , if necessary	'host name {user name}:' will be displayed.	
67	Enter: cat edf_edc	The saved message will be displayed on the screen.	The E-mail message received by EDC will be compared to verify that the message is not corrupted after being transferred.
68	Enter: cat edf_dist_edc	The saved message will be displayed on the screen.	The E-mail message received by EDC will be compared to verify that the message is not corrupted after being transferred.
69	Enter: mail <userid at EDF@internet mail address> Note: For Ir1 mail server, use dps1sgiedf.gsfc.nasa.gov	Enter the mail system and wait for the message text to be entered.	
70	Type the message text for acknowledgment to EDF	The entire message will be displayed on the screen.	
71	Press ctrl-D keys to send the message to EDF.	'host name {user name}:' will be displayed.	
72	Enter: exit to leave EDC	Back to LaRC	
73	Enter: exit to leave LaRC	Back to MSFC	
74	Enter : exit to leave MSFC	Back to SGFC	
75	Enter : exit to leave SGFC	Back to EDF	
76	Enter: mail on the AIT workstation at EDF to display mail messages received from all DAACs.	A mail message will be displayed on the screen followed by '?'. '?' will be prompted	
77	Enter: s edc_edf		
78	Hit "Enter" key for the next mail message	The next message is displayed	
79	Enter: s larc_edf	'?' will be prompted	
80	Hit "Enter" key for the next mail message	The next message is displayed	
81	Enter: s msfc_edf	'?' will be prompted	
82	Hit "Enter" for the next mail message	The next message is displayed	
83	Enter: s gsfc_edf	'?' will be prompted	
84	Enter: q , to quit, if necessary	'host name {user name}:' will be displayed.	

85	Enter: cat gsfc_edf	The saved mail message will be displayed on the screen.	The mail message received by LaRC will be compared to verify that the message is not corrupted after being transferred.
86	Enter: cat msfc_edf	The saved mail message will be displayed on the screen.	The mail message received by LaRC will be compared to verify that the message is not corrupted after being transferred.
87	Enter: cat larc_edf	The saved mail message will be displayed on the screen.	The mail message received by LaRC will be compared to verify that the message is not corrupted after being transferred.
88	Enter: cat edc_edf	The saved mail message will be displayed on the screen.	The mail message received byEDC will be compared to verify that the message is not corrupted after being transferred.
89	Enter: ctrl-D to stop the recording	Script file is stoped	
90	Click the right button of the mouse on AIT workstation at EDF.	'Root Menu' will be displayed.	
91	Select the ' quit ' button and confirm the logout	Successful logoff at EDF	

5.2.5 E-mail from EDF to GSFC Test Procedures (TC01-02.05.01)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Enter: login <userid at EDF> on the AIT Workstation at EDF	'Enter Password:' will be displayed on the screen	This test procedure is identical to part of TC010.001 .
2	Enter: <password>	'host name {user name}:' will be displayed.	In Ir-1 configuration each workstation may not have an individual mail server.
3	Enter: script TC2.5_log on the AIT workstation at EDF	Script started , file is TC2.5_log. All input/output to the workstation will be recorded in this file.	
4	Enter: mail <userid at GSFC@internet mail address> and hit enter key Note: use ' userid@ecsgsfc1.gsfc.nasa.gov ' for test	Enter the mail system and wait for the message text to be entered.	
5	Type the message text to send to GSFC	The entire message will be displayed on the screen.	
6	Press "." to send the message to GSFC.	'host name {user name}:' will be displayed.	
7	Enter:" rlogin " <host name or ip address at GSFC> from the AIT workstation to GSFC	'login:' will be displayed on the screen	
8	Enter: <password> to login	'host name {user name}:' will be displayed.	
9	Enter: mail Note: This will display mail messages received by this userid at GSFC.	A mail message will be displayed on the screen followed by '?'.	
10	Hit enter until the message sent from EDF is displayed on the screen	The message content is displayed	
11	Enter: s edf_gsfc_2	The message is saved	
12	Enter: q , to quit, if necessary	'host name {user name}:' will be displayed.	
13	Enter: cat edf_gsfc_2 .	The saved mail message will be displayed on the screen	The mail message received by GSFC will be compared to verify that the message is not modified after being transferred.
14	Enter: stty kill cntl-U	This is necessary, if you type @ sign will clear the previous typing	

15	Enter: mail <userid at EDF@internet mail address> Note: use lr1 mail server: dps1sgiedf.gsfc.nasa.gov	Enter the mail system and wait for the message text to be entered.	
16	Type the message text for acknowledgment to EDF followed by enter key.	The entire message will be displayed on the screen.	
17	Press "." to send the message to EDF.	'host name {user name}:' will be displayed.	
18	Enter: exit to leave GSFC	Back to EDF	
19	Enter: mail on the AIT workstation at EDF to display mail messages received	A mail message will be displayed on the screen followed by '?'. The message content is displayed	
20	Hit enter until the message sent from GSFC is displayed on the screen		
21	Enter: s gsfc_edf_2	Message is saved	
22	Enter: q , to quit, if necessary	'host name {user name}:' will be displayed.	
23	Enter: cat gsfc_edf_2 .	The saved mail message will be displayed on the screen	The mail message received by EDF will be compared to verify that the message is not modified after being transferred.
24	Enter: ctrl-D to stop recording	Script file is stoped	
25	Click the right button of the mouse on AIT workstation at EDF	'Root Menu' will be displayed.	
26	Select the ' quit ' button and confirm the quit.	Successful logoff on the AIT workstation at EDF.	

5.2.6 E-Mail from EDF to LaRC Test Procedures (TC01-02.05.02)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Enter: login <userid at EDF> on the AIT Workstation at EDF.	'Enter Password:' will be displayed on the screen	This test procedure is identical to part of TC010.001.
2	Enter: <password>	'host name {user name}:' will be displayed.	
3	Enter: script TC2.6_log on the AIT workstation at EDF	Script started , file is TC2.6_log. All input/output to the workstation will be recorded in this file.	
4	Enter: mail <userid at LaRC@internet mail address> and hit enter key Note: use ' userid@ecs.larc.nasa.gov ' for test	Enter the mail system and wait for the message text to be entered.	
5	Type the message text to send to LaRC	The entire message will be displayed on the screen.	
6	Press "." to send the message to LaRC.	'host name {user name}:' will be displayed.	
7	Enter: " rlogin " <host name or ip address at LaRC> from the AIT workstation to LaRC	'login:' will be displayed on the screen	
8	Enter: <password> to login	'host name {user name}:' will be displayed.	
9	Enter: mail Note: This will display mail messages received by this userid at LaRC.	A mail message will be displayed on the screen followed by '?'. 	
10	Hit enter until the message sent from EDF is displayed on the screen	The message content is displayed	
11	Enter: s edf_larc_2	The message received from EDF will be saved in the file.	
12	Enter: q , to quit, if necessary	'host name {user name}:' will be displayed.	
13	Enter: cat edf_larc_2	A mail message will be displayed on the screen followed by '?'. 	The mail message received by LaRC will be compared to verify that the message is not modified after being transferred.

14	Enter: mail <userid at EDF@internet mail address> Note; use lr1 mail server: dps1gsiedf.gsfc.nasa.gov	Enter the mail system and wait for the message text to be entered.	
15	Type the message text for acknowledgment to EDF followed by enter key.	The entire message will be displayed on the screen.	
16	Press "." to send the message to EDF.	'host name {user name}:' will be displayed.	
17	Enter: exit to leave LaRC	Back to EDF	
18	Enter: mail on the AIT workstation at EDF to display mail messages received	A mail message will be displayed on the screen followed by '?'. The message content is displayed	
19	Hit enter until the message sent from LaRC is displayed on the screen		
20	Enter: s larc_edf_2	Message is saved	
23	Enter: cat larc_edf_2 .	The saved mail message will be displayed on the screen	The mail message received by EDF will be compared to verify that the message is not modified after being transferred.
21	Enter: q , to quit, if necessary	'host name {user name}:' will be displayed.	
22	Press ctrl-D keys to stop the recording.	'script done, file is "TC2.6_log" ' will be displayed.	Verify all activities by each account recorded in the history log file.
23	Click the right button of the mouse on AIT workstation at EDF	'Root Menu' will be displayed.	
24	Select the ' quit ' button and confirm the quit.	Successful logoff	

5.2.7 SCF to DAAC message Transfer Test Procedures (TC010.002)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Enter: login <userid at SCF> on the Workstation at SCF.	'Enter Password:' will be displayed on the screen	This test procedure is similar to testcase TC010.001.
2	Enter: <password>	'host name {user name}:' will be displayed.	
3	Enter: script TC2.7_log	Script started, file is TC2.7_log All I/O at this workstation will be recorded in this file	
4	Enter: mail <userid at GSFC@internet mail address> and hit enter key Note: use ' userid@ecsgsfc1.gsfc.nasa.gov ' for test	Enter the mail system and wait for the message text to be entered.	
5	Type the message text to send to GSFC	The entire message will be displayed on the screen.	
6	Press "." to send the message to GSFC.	'host name {user name}:' will be displayed.	
7	Enter: mail <userid at MSFC@internet mail address> Note: use ' userid@hydra.msfc.nasa.gov ' for test	Enter the mail system and wait for the message text to be entered.	
8	Type the message text to send to MSFC	The entire message will be displayed on the screen.	
9	Press "." to send the message to MSFC.	'host name {user name}:' will be displayed.	
10	Enter: mail <userid at LaRC@internet mail address> Note: use ' userid@ecs.larc.nasa.gov ' for test	Enter the mail system and wait for the message text to be entered.	
11	Type the message text to send to LaRC	The entire message will be displayed on the screen.	
12	Press "." to send the message to LaRC.	'host name {user name}:' will be displayed.	
13	Enter: mail <userid at EDC@internet mail address> Note: use ' userid@ecs-hp1.cr.usgs.gov ' for test	Enter the mail system and wait for the message text to be entered.	
14	Type the message text to send to EDC	The entire message will be displayed on the screen.	
15	Press "." to send the message to EDC.	'host name {user name}:' will be displayed.	

16	Enter: rlogin <host name or ip address at GSFC> from the AIT workstation to GSFC.	'login:' will be displayed on the screen	
17	Enter: <password> to login	'host name {user name}:' will be displayed.	
18	Enter: mail Note: This will display mail messages received by this userid at GSFC.	A mail message will be displayed on the screen followed by '?'. 	
19	Hit enter key until the message sent from SCF is displayed on the screen	The message content is displayed	
20	Enter: s scf_gsfc	The message received from SCF is saved	
21	Enter: q , to quit, if necessary	'host name {user name}:' will be displayed.	
22	Enter: cat scf_gsfc .	A mail message will be displayed on the screen followed by '?'. 	The mail message received by GSFC will be compared to verify that the message is not modified after being transferred.
23	Enter: stty kill cntl-U	This is necessary, if you type @ sign will clear the previous typing	
24	Enter: mail <userid at SCF@internet mail address> and hit enter key Note: use kazon.hitc.com as the workstation at SCF	Enter the mail system and wait for the message text to be entered.	
25	Type the message text for acknowledgment to SCF	The entire message will be displayed on the screen.	
26	Press "." to send the message to SCF.	'host name {user name}:' will be displayed.	
27	Enter:telnet <host name or ip address at MSFC> from the AIT workstation to MSFC	'login:' will be displayed on the screen	
28	Enter: userid and <password> to login	'host name {user name}:' will be displayed.	
29	Enter: mail Note: This will display mail messages received by this userid at MSFC..	A mail message will be displayed on the screen followed by '?'. 	
30	Hit enter key until the message sent from SCF is displayed on the screen	The message content is displayed	
31	Enter: s scf_msfc	Message received from SCF is saved	
32	Enter: q , if necessary	'host name {user name}:' will be displayed	

33	Enter: cat scf_msfc	The saved mail message will be displayed on the screen.	The E-mail message received by MSFC will be compared to verify that the message is not modified after being transferred.
34	Enter: mail <userid at SCF@internet mail address> and hit enter key	Enter the mail system and wait for the message text to be entered.	
35	Type the message text for acknowledgment to SCF	The entire message will be displayed on the screen.	
36	Press "." to send the message to SCF.	'host name {user name}:' will be displayed.	
37	Enter:telnet <host name or ip address at LaRC> from the AIT workstation to LaRC	'login:' will be displayed on the screen	
38	Enter: userid and <password> to login	'host name {user name}:' will be displayed.	
39	Enter: mail Note: This will display mail messages received by this userid at LaRC..	A mail message will be displayed on the screen followed by '?'. 	
40	Hit enter key until the message sent from SCF is displayed on the screen	The message content is displayed	
41	Enter: s scf_larc	'?' will be prompted	
42	Enter: q , if necessary	'host name {user name}:' will be displayed.	
43	Enter: cat scf_larc	A mail message will be displayed on the screen.	The E-mail message received by LaRC will be compared to verify that the message is not modified after being transferred.
44	Enter: mail <userid at SCF@internet mail address> and hit enter key	Enter the mail system and wait for the message text to be entered.	
45	Type the message text for acknowledgment to SCF	The entire message will be displayed on the screen.	
46	Press "." to send the message to SCF.	'host name {user name}:' will be displayed.	
47	Enter:telnet <host name or ip address at EDC> from the AIT workstation to EDC	'login:' will be displayed on the screen	
48	Enter: userid and <password> to login	'host name {user name}:' will be displayed.	

49	Enter: mail Note: This will display mail messages received by this userid at EDC..	A mail message will be displayed on the screen followed by '?'. 	
50	Hit enter key until the message sent from SCF is displayed on the screen	The message content is displayed	
51	Enter: s scf_edc	Received message is saved	
52	Enter: q , if necessary	'host name {user name}:' will be displayed.	
53	Enter: cat scf_edc	A mail message will be displayed on the screen.	The E-mail message received by EDC will be compared to verify that the message is not modified after being transferred.
54	Enter: mail <userid at SCF@internet mail address> and hit enter key	Enter the mail system and wait for the message text to be entered.	
55	Type the message text for acknowledgment to SCF	The entire message will be displayed on the screen.	
56	Press "." to send the message to SCF.	'host name {user name}:' will be displayed.	
57	Enter: exit to leave EDC	Back to GSFC	
58	Enter: exit to leave LaRC	Back to MSFC	
59	Enter : exit to leave MSFC	Back to SGFC	
60	Enter : exit to leave SGFC	Back to EDF	
61	Enter: mail on the workstation at SCF to display mail messages received from all DAACs.	A mail message will be displayed on the screen followed by '?'. 	
62	Enter: s edc_scf	'?' will be prompted	
63	Hit "Enter" for the next mail message to display	The next message is displayed	
64	Enter: s larc_scf	'?' will be prompted	
65	Hit "Enter" for the next mail message to display	The next message is displayed	
66	Enter: s msfc_scf	'?' will be prompted	
67	Hit "Enter" for the next mail message to display	The next message is displayed	
68	Enter: s gsfc_scf	'?' will be prompted	

69	Enter: q , if necessary	'host name {user name}:' will be displayed.	
70	Enter: cat edc_scf	A mail message will be displayed on the screen.	The mail message received by EDC will be compared to verify that the message is not modified after being transferred.
71	Enter: cat gsfc_scf	A mail message will be displayed on the screen.	The mail message received by GSFC will be compared to verify that the message is not modified after being transferred.
72	Enter: cat msfc_scf	A mail message will be displayed on the screen.	The mail message received by MSFC will be compared to verify that the message is not modified after being transferred.
73	Enter: cat larc_scf	A mail message will be displayed on the screen.	The mail message received by LaRC will be compared to verify that the message is not modified after being transferred.
74	Press ctrl-D to stop recording input and output	script done, file is "TC2.7_log"	
75	Click the right button of the mouse on workstation at SCF.	'Root Menu' will be displayed.	
76	Select the ' quit ' button and confirm the quit.	Successful logoff at SCF	

5.2.8 E-mail from EDF to EDC Test Procedures (TC01-02.05.04)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Enter: login <userid at EDF> on the AIT Workstation at EDF.	'Enter Password:' will be displayed on the screen	This test procedure is identical to part of TC010.001 .
2	Enter: <password> .	'host name {user name}:' will be displayed.	
3	Enter: script TC2.8_log	Script started, file is TC2.8_log All input/output to the workstation will be recorded in the log_msg file.	
4	Enter: mail <userid at EDC@internet mail address> Note: use ' userid@ecs-hp1.cr.usgs.gov ' for test	Enter the mail system and wait for the message to be entered.	
5	Type a message to send it to EDC followed by enter key.	The entire message will be displayed on the screen.	
6	Type "." to send the message to EDC.	'host name {user name}:' will be displayed.	
7	Enter: " rlogin " < host name of ip address at EDC> on the AIT workstation at EDF	'login:' will be displayed on the screen.	
8	Enter: <password> to login	'host name {user name}:' will be displayed.	
9	Enter: mail Note: This is to display mail messages received by this userid at EDC	A mail message will be displayed on the screen followed by '?'. 	
10	Hit enter until the message sent from EDF is displayed on the screen	The message content is displayed	
11	Enter: s edf_edc_2	The message is saved	
12	Enter: q , if necessary	'host name {user name}:' will be displayed.	
13	Enter: cat edf_edc_2	A saved mail message will be displayed on the screen.	The mail message received by EDC will be compared to verify that the message is not corrupted after being transferred.
14	Enter: mail <userid at EDF@internet mail address> and hit enter key Note: use lr_1 mail server: dps1sgiedf.gsfc.nasa.gov	Enter the mail system and wait for the message text to be entered.	

15	Type the message text for acknowledgment to EDF and followed by enter key	The entire message will be displayed on the screen.	
16	Type "." to send the message to EDF.	'host name {user name}:' will be displayed.	
17	Enter: exit to leave EDC	Back to EDF	
18	Enter: mail on the AIT workstation at EDF to display mail messages received	A mail message will be displayed on the screen followed by '?'. The message content is displayed	
19	Hit enter until the message sent from EDC is displayed on the screen		
20	Enter: s edc_edf_2	Message is saved	
21	Enter: q , if necessary	'host name {user name}:' will be displayed.	
22	Enter: cat edc_edf_2	A saved mail message will be displayed on the screen.	The mail message received by EDF will be compared to verify that the message is not corrupted after being transferred.
23	Press ctrl-D keys to stop the recording.	'script done, file is "TC2.8_log" ' will be displayed.	Verify all activities by each account recorded in the history log file.
24	Click the right button of the mouse on AIT workstation at EDF.	'Root Menu' will be displayed.	
25	Select the ' quit ' button and confirm the quit.	Successful logoff at EDF	

5.2.9 DAAC to DAAC message Transfer Test Procedures (TC010.003)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Enter: login < userid at EDF> on the AIT Workstation at EDF	'Enter Password:' will be displayed on the screen	This test procedure is similar to TC010.001
2	Click the right button of the mouse on AIT workstation at EDF and select to open "four" windows	Four windows are opened	
3	Enter: rlogin < userid at GSFC> on one of the window Note: use ' userid@ecsgsfc1.gsfc.nasa.gov '	'Enter Password:' will be displayed on the screen	
4	Enter: <password>	'host name {user name}:' will be displayed.	
5	Enter: script TC2.9_gsfc_log	Script started, file is TC2.9_gsfc_log. All input/output to the workstation will be recorded in the log file.	
6	Enter: stty kill cntl-U	This is necessary, if you type @ sign will clear the previous typing	
7	Enter: mail <userid at MSFC@internet mail address> Note: use ' userid@hydra.msfc.nasa.gov '	Enter the mail system and wait for the message to be entered.	
8	Type the message text to send to MSFC and followed by enter key	The entire message will be displayed on the screen.	
9	Type "." to send the message to MSFC.	'host name {user name}:' will be displayed.	
10	Enter: mail <userid at LaRC@internet mail address> Note: use ' userid@ecs.larc.nasa.gov '	The mail system will wait for the message to be entered.	
11	Type the message text to send to LaRC and followed by enter key	The entire message will be displayed on the screen.	
12	Type "." to send the message to LaRC.	'host name {user name}:' will be displayed.	
13	Enter: mail <userid at EDC@internet mail address> Note: use ' userid@ecs-hp1.cr.usgs.gov '	The mail system will wait for the message to be entered.	
14	Type the message text to send to EDC and followed by enter key	The entire message will be displayed on the screen.	
15	Type "." to send the message to EDC.	'host name {user name}:' will be displayed.	
16	Enter: mail <userid at MSFC@internet mail address> <userid at LaRC@internet mail address> <userid at EDC@internet mail address >.	Enter the mail system and wait for the distribute message to be entered.	

17	Type the message text to distribute to all other DAACs: MSFC, LaRC, EDC followed by enter key.	The entire message will be displayed on the screen.	
18	Type "." to send the message to three other DAACs : MSFC, LaRC, EDC.	'host name {user name}:' will be displayed.	
19	Enter: rlogin <userid at MSFC> on one of the window Note: use ' userid@hydra.msfc.nasa.gov '	'Enter Password:' will be displayed on the screen	
20	Enter: <password>	'host name {user name}:' will be displayed.	
21	Enter: script TC2.9_msfc_log	Script started, file is TC2.9_msfc_log. All input/output to the workstation will be recorded in the log_msg file.	
22	Enter: mail <userid at GSFC@internet mail address> Note:use ' userid@ecsgsfc1.gsfc.nasa.gov '	Enter the mail system and wait for the message to be entered.	
23	Type the message text to send to GSFC and followed by enter key.	The entire message will be displayed on the screen.	
24	Type "." to send the message to GSFC.	'host name {user name}:' will be displayed.	
25	Enter: mail <userid at LaRC@internet mail address> Note: use userid@ecs.larc.nasa.gov "	Enter the mail system and wait for the message to be entered.	
26	Type the message text to send to LaRC and followed by enter key	The entire message will be displayed on the screen.	
27	Type "." to send the message to LaRC	'host name {user name}:' will be displayed.	
28	Enter: mail <userid at EDC@internet mail address> Note: use ' userid@ecs-hp1.cr.usgs.gov '	Enter the mail system and wait for the message to be entered.	
29	Type the message text to send to EDC and followed by enter key	The entire message will be displayed on the screen.	
30	Type "." to send the message to EDC.	'host name {user name}:' will be displayed.	
31	Enter: mail <userid at GSFC@internet mail address> <userid at LaRC@internet mail address> <userid at EDC@internet mail address >.	Enter the mail system and wait for the distribute message to be entered.	
32	Type the message text to distribute to all DAACs: GSFC, LaRC, EDC and followed by enter key	The entire message will be displayed on the screen.	
33	Type "." to send the message to three DAACs: GSFC, LaRC, EDC.	'host name {user name}:' will be displayed.	

34	Enter: rlogin <userid at LaRC> on one of the window Note: use ' userid@ecs.larc.nasa.gov '	'Enter Password:' will be displayed on the screen	
35	Enter: <password>	'host name {user name}:' will be displayed.	
36	Enter: script TC2.9_larc_log.	Script started, file is TC2.9_larc_log. All input/output to the workstation will be recorded in the log_msg file.	
37	Enter: mail <userid at GSFC@internet mail address> Note: use ' userid@ecsgsfc1.gsfc.nasa.gov '	Enter the mail system and wait for the message to be entered.	
38	Type the message text to send to GSFC and followed by enter key	The entire message will be displayed on the screen.	
39	Type "." to send the message to GSFC.	'host name {user name}:' will be displayed.	
40	Enter: mail <userid at MSFC@internet mail address> Note: use ' userid@hydra.msfc.nasa.gov '	Enter the mail system and wait for the message to be entered.	
41	Type the message text to send to MSFC and followed by enter key	The entire message will be displayed on the screen.	
42	Type "." to send the message to MSFC.	'host name {user name}:' will be displayed.	
43	Enter: mail <userid at EDC@internet mail address> Note: use ' userid@ecs-hp1.cr.usgs.gov '	Enter the mail system and wait for the message to be entered.	
44	Type the message text to send to EDC and followed by enter key	The entire message will be displayed on the screen.	
45	Type "." to send the message to EDC and followed by enter key.	'host name {user name}:' will be displayed.	
46	Enter: mail <userid at GSFC@internet mail address> <userid at MSFC@internet mail address> <userid at EDC@internet mail address >.	Enter the mail system and wait for the distribute message to be entered.	
47	Type the distribute message text to send to all other DAACs : GSFC, MSFC, EDC	The entire message will be displayed on the screen.	
48	Type "." to send the message to three other DAACs: GSFC, MSFC, EDC.	'host name {user name}:' will be displayed.	
49	Enter: rlogin <userid at EDC> on one of the window Note: use ' userid@ecs-hp1.cr.usgs.gov '	'Enter Password:' will be displayed on the screen	
50	Enter: <password>	'host name {user name}:' will be displayed.	

51	Enter: script TC2.9_edc_log	Script started, file is TC2.9_edc_log. All input/output to the workstation will be recorded in the log_msg file.	
52	Enter: mail <userid at GSFC@internet mail address> Note: use ' userid@ecsgsfc1.gsfc.nasa.gov '	Enter the mail system and wait for the message to be entered.	
53	Type the message text to send to GSFC and followed by enter key	The entire message will be displayed on the screen.	
54	Press "." to send the message to GSFC	'host name {user name}:' will be displayed.	
55	Enter: mail <userid at MSFC@internet mail address> Note: use ' userid@hydra.msfc.nasa.gov '	Enter the mail system and wait for the message to be entered.	
56	Type the message text to send to MSFC and followed by enter key	The entire message will be displayed on the screen.	
57	Press "." to send the message to MSFC.	'host name {user name}:' will be displayed.	
58	Enter: mail <userid at LaRC@internet mail address> Note: use ' userid@ecs.larc.nasa.gov '	Enter the mail system and wait for the message to be entered.	
59	Type the message text to send to LaRC and followed by enter key	The entire message will be displayed on the screen.	
60	Type "." to send the message to LaRC	'host name {user name}:' will be displayed.	
61	Enter: mail <userid at GSFC@internet mail address> <userid at MSFC@internet mail address> <userid at LaRC@internet mail address >.	Enter the mail system and wait for the distribute message to be entered.	
62	Type the message text to distribute to three DAACs: GSFC, MSFC, LaRC and followed by enter key	The entire message will be displayed on the screen.	
63	Press "." to send the message to three DAACs: GSFC, MSFC, LaRC.	'host name {user name}:' will be displayed.	
64	Enter: mail on the " GSFC " window	A mail message will be displayed on the screen followed by '?'. '?' will be prompted	
65	Enter: s edc_gsfc_d Note This is the distributed message received from EDC.		
66	Hit "Enter" for the next mail message to display	The next mail message is displayed	

67	Enter: s edc_gsfc_i Note This is an individual message received from EDC.	'?' will be prompted	
68	Hit "Enter" for the next mail message to display	The next mail message is displayed	
69	Enter: s larc_gsfc_d Note This is the distributed message received from LaRC.	'?' will be prompted	
70	Hit "Enter" for the next mail message to display	The next mail message is displayed	
71	Enter: s larc_gsfc_i Note This is an individual message received from LaRC.	'?' will be prompted	
72	Hit "Enter" for the next mail message to display	The next mail message is displayed	
73	Enter: s msfc_gsfc_d Note This is the distributed message received from MSFC	'?' will be prompted	
74	Hit "Enter" for the next mail message to display	The next mail message is displayed	
75	Enter: s msfc_gsfc_i Note This is an individual message received from MSFC	'?' will be prompted	
76	Enter: q , if necessary	'host name {user name}:' will be displayed	
77	Enter: cat msfc_gsfc_i to display the message	A mail message will be displayed on the screen.	The mail message received by GSFC will be compared to verify that the message is not corrupted after being transferred.
78	Enter: cat larc_gsfc_i to display the message	A mail message will be displayed on the screen.	The mail message received by GSFC will be compared to verify that the message is not corrupted after being transferred.

79	Enter: cat edc_gsfc_i to display the message	A mail message will be displayed on the screen.	The mail message received by GSFC will be compared to verify that the message is not corrupted after being transferred.
80	Enter: cat msfc_gsfc_d to display the message	A mail message will be displayed on the screen.	The mail message received by GSFC will be compared to verify that the message is not corrupted after being transferred.
81	Enter: cat larc_gsfc_d to display the message	A mail message will be displayed on the screen.	The mail message received by GSFC will be compared to verify that the message is not corrupted after being transferred.
82	Enter: cat edc_gsfc_d to display the message	A mail message will be displayed on the screen.	The mail message received by GSFC will be compared to verify that the message is not corrupted after being transferred.
83	Press exit on GSFC workstation to stop recording the I/O.	Script done, file is "TC2.9_gsfc_log"	
84	Enter: lpr -P <printer name> <file name>	The script file will be printed	
85	Enter: exit to leave the GSFC	Back to EDF	
86	Click the upper left corner of the window.	A Menu will be displayed.	
87	Select the ' close '	Window for GSFC is closed	
88	Enter: mail on the " MSFC " window	A mail message will be displayed on the screen followed by '?'. '?' will be prompted	
89	Enter: s edc_msfc_d Note This is the distributed message received from EDC.		
90	Hit "Enter" for the next mail message to display	The next mail message is displayed	
91	Enter: s edc_msfc_i Note This is an individual message received from EDC.	'?' will be prompted	
92	Hit "Enter" for the next mail message to display	The next mail message is displayed	

93	Enter: s larc_msfc_d Note This is the distributed message received from LaRC.	'?' will be prompted	
94	Hit "Enter" for the next mail message to display	The next mail message is displayed	
95	Enter: s larc_msfc_i Note This is an individual message received from LaRC.	'?' will be prompted	
96	Hit "Enter" for the next mail message to display	The next mail message is displayed	
97	Enter: s gsfc_msfc_d Note This is the distributed message received from GSFC	'?' will be prompted	
98	Hit "Enter" for the next mail message to display	The next mail message is displayed	
99	Enter: s gsfc_msfc_i Note This is an individual message received from GSFC	'?' will be prompted	
100	Enter: q , if necessary	'host name {user name}:' will be displayed	
101	Enter: cat gsfc_msfc_i to display the message	A mail message will be displayed on the screen.	The mail message received by MSFC will be compared to verify that the message is not corrupted after being transferred.
102	Enter: cat larc_msfc_i to display the message	A mail message will be displayed on the screen.	The mail message received by MSFC will be compared to verify that the message is not corrupted after being transferred.
103	Enter: cat edc_msfc_i to display the message	A mail message will be displayed on the screen.	The mail message received by MSFC will be compared to verify that the message is not corrupted after being transferred.
104	Enter: cat gsfc_msfc_d to display the message	A mail message will be displayed on the screen.	The mail message received by MSFC will be compared to verify that the message is not corrupted after being transferred.

105	Enter: cat larc_msfc_d to display the message	A mail message will be displayed on the screen.	The mail message received by MSFC will be compared to verify that the message is not corrupted after being transferred.
106	Enter: cat edc_msfc_d to display the message	A mail message will be displayed on the screen.	The mail message received by MSFC will be compared to verify that the message is not corrupted after being transferred.
107	Press ctrl-d to stop recording input and output	script done, file is "TC2.9_msfc_log"	The mail message received by MSFC will be compared to verify that the message is not corrupted after being transferred.
108	Enter: lpr -P <printer name> <file name>	The script file containing input/output will be printed.	
109	Click the upper left corner of the window	A Menu will be displayed.	
110	Enter : exit to leave MSFC	Back to EDF	
111	Select the ' close '	Successful close MSFC window	
112	Enter: mail on the EDC window	A mail message will be displayed on the screen followed by '?'. '?' will be prompted	
113	Enter: s larc_edc_d Note This is the distributed message received from LaRC.		
114	Hit "Enter" for the next mail message to display	The next mail message is displayed	
115	Enter: s larc_edc_i Note This is an individual message received from LaRC.	'?' will be prompted	
116	Hit "Enter" for the next mail message to display	The next mail message is displayed	
117	Enter: s msfc_edc_d Note This is the distributed message received from MSFC	'?' will be prompted	
118	Hit "Enter" for the next mail message to display	The next mail message is displayed	

119	Enter: s msfc_edc_i Note This is an individual message received from MSFC.	'?' will be prompted	
120	Hit "Enter" for the next mail message to display	The next mail message is displayed	
121	Enter: s gsfc_edc_d Note This is the distributed message received from GSFC.	'?' will be prompted	
122	Hit "Enter" for the next mail message to display	The next mail message is displayed	
123	Enter: s gsfc_edc_i Note This is an individual message received from GSFC..	'?' will be prompted	
124	Enter: q , if necessary	'host name {user name}:' will displayed	
125	Enter: cat msfc_edc_i to display the message	A mail message will be displayed on the screen.	The mail message received by EDC will be compared to verify that the message is not modified after being transferred.
126	Enter: cat gsfc_edc_i to display the message	A mail message will be displayed on the screen.	The mail message received by EDC will be compared to verify that the message is not modified after being transferred.
127	Enter: cat larc_edc_i to display the message	A mail message will be displayed on the screen.	The mail message received by EDC will be compared to verify that the message is not modified after being transferred.
128	Enter: cat msfc_edc_d to display the message	A mail message will be displayed on the screen.	The mail message received by EDC will be compared to verify that the message is not modified after being transferred.
129	Enter: cat gsfc_edc_d to display the message	A mail message will be displayed on the screen.	The mail message received by EDC will be compared to verify that the message is not modified after being transferred.

130	Enter: cat larc_edc_dto display the message	A mail message will be displayed on the screen.	The mail message received by EDC will be compared to verify that the message is not modified after being transferred.
131	Press ctrl-d to stop recording input and output	script done, file is "TC2.9_edc_log"	
132	Enter: lpr -P <printer name> <file name>	The script file containing input/output will be printed.	
133	Enter: exit from EDC	Back to EDF	
134	Click the upper left corner of the window	A Menu will be displayed.	
135	Select the ' close ' to close the window	Successful close the window	
136	Enter: mail on the LaRC window	A mail message will be displayed on the screen followed by '?'. '?' will be prompted	
137	Enter: s edc_larc_d Note This is the distributed message received from EDC.		
138	Hit "Enter" for the next mail message to display	The next mail message is displayed	
139	Enter: s edc_larc_i Note This is an individual message received from EDC	'?' will be prompted	
138	Hit "Enter" for the next mail message to display	The next mail message is displayed	
139	Enter: s msfc_larc_d Note This is the distributed message received from MSFC	'?' will be prompted	
140	Hit "Enter" for the next mail message to display	The next mail message is displayed	
141	Enter: s msfc_larc_i Note This is an individual message received from MSFC	'?' will be prompted	
142	Hit "Enter" for the next mail message to display	The next mail message is displayed	
143	Enter: s gsfc_larc_i Note This is an individual message received from GSFC	'?' will be prompted	
144	Hit "Enter" for the next mail message to display	The next mail message is displayed	

145	Enter: s gsfc_larc_d Note This is the distributed message received from GSFC	'?' will be prompted	
146	Enter: q , if necessary	'host name {user name}:' will be displayed	
147	Enter: cat msfc_larc_i to display the message	A mail message will be displayed on the screen.	The mail message received by LaRC will be compared to verify that the message is not corrupted after being transferred.
148	Enter: cat gsfc_larc_i to display the message	A mail message will be displayed on the screen.	The mail message received by LaRC will be compared to verify that the message is not corrupted after being transferred.
149	Enter: cat edc_larc_i to display the message	A mail message will be displayed on the screen.	The mail message received by LaRC will be compared to verify that the message is not corrupted after being transferred.
150	Enter: cat msfc_larc_s to display the message	A mail message will be displayed on the screen.	The mail message received by LaRC will be compared to verify that the message is not corrupted after being transferred.
151	Enter: cat gsfc_larc_s to display the message	A mail message will be displayed on the screen.	The mail message received by LaRC will be compared to verify that the message is not corrupted after being transferred.
152	Enter: cat edc_larc_s to display the message	A mail message will be displayed on the screen.	The mail message received by LaRC will be compared to verify that the message is not corrupted after being transferred.
153	Press ctrl-d to stop recording input and output	script done, file is "TC2.9_larc_log"	
154	Enter: lpr -P <printer name> <file name>	The script file containing input/output will be printed.	
155	Enter: exit from LaRC window	Back to EDF	
156	Click the right button of the mouse	"Root Menu" will be displayed.	
157	Select the ' quit ' button and confirm the quit.	Successful logoff	

5.2.10 E-mail from DAAC to DAAC Test Procedures (TC01-02.05.05)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Enter: login <userid at EDF> on the AIT Workstation at EDF	'Enter Password:' will be displayed on the screen	This test procedure is identical with testcase TC010.003
2	Click the right button of the mouse on AIT workstation at EDF and select to open "four" windows	Four windows are opened	
3	Enter: rlogin <userid at GSFC> on one of the window Note: use ' userid@ecsgsfc1.gsfc.nasa.gov '	'Enter Password:' will be displayed on the screen	
4	Enter: <password>	'host name {user name}:' will be displayed.	
5	Enter: script TC2.10_gsfc_log	Script started, file is TC2.10_gsfc_log. All input/output to the workstation will be recorded in the log file.	
6	Enter: stty kill cntl-U	This is necessary, if you type @ sign will clear the previous typing	
7	Enter: mail <userid at MSFC@internet mail address> Note: use ' userid@hydra.msfc.nasa.gov '	Enter the mail system and wait for the message to be entered.	
8	Type the message text to send to MSFC and followed by enter key	The entire message will be displayed on the screen.	
9	Type "." to send the message to MSFC.	'host name {user name}:' will be displayed.	
10	Enter: mail <userid at LaRC@internet mail address> Note: use ' userid@ecs.larc.nasa.gov '	The mail system will wait for the message to be entered.	
11	Type the message text to send to LaRC and followed by enter key	The entire message will be displayed on the screen.	
12	Type "." to send the message to LaRC.	'host name {user name}:' will be displayed.	
13	Enter: mail <userid at EDC@internet mail address> Note: use ' userid@ecs-hp1.cr.usgs.gov '	The mail system will wait for the message to be entered.	
14	Type the message text to send to EDC and followed by enter key	The entire message will be displayed on the screen.	
15	Type "." to send the message to EDC.	'host name {user name}:' will be displayed.	
16	Enter: mail <userid at MSFC@internet mail address> <userid at LaRC@internet mail address> <userid at EDC@internet mail address >.	Enter the mail system and wait for the distribute message to be entered.	

17	Type the message text to distribute to all other DAACs: MSFC, LaRC, EDC followed by enter key.	The entire message will be displayed on the screen.	
18	Type "." to send the message to three other DAACs : MSFC, LaRC, EDC.	'host name {user name}:' will be displayed.	
19	Enter: rlogin <userid at MSFC> on one of the window Note: use ' userid@hydra.msfc.nasa.gov '	'Enter Password:' will be displayed on the screen	
20	Enter: <password>	'host name {user name}:' will be displayed.	
21	Enter: script TC2.10_msfc_log	Script started, file is TC2.10_msfc_log. All input/output to the workstation will be recorded in the log_msg file.	
22	Enter: mail <userid at GSFC@internet mail address> Note:use ' userid@ecsgsfc1.gsfc.nasa.gov '	Enter the mail system and wait for the message to be entered.	
23	Type the message text to send to GSFC and followed by enter key.	The entire message will be displayed on the screen.	
24	Type "." to send the message to GSFC.	'host name {user name}:' will be displayed.	
25	Enter: mail <userid at LaRC@internet mail address> Note: use userid@ecs.larc.nasa.gov "	Enter the mail system and wait for the message to be entered.	
26	Type the message text to send to LaRC and followed by enter key	The entire message will be displayed on the screen.	
27	Type "." to send the message to LaRC	'host name {user name}:' will be displayed.	
28	Enter: mail <userid at EDC@internet mail address> Note: use ' userid@ecs-hp1.cr.usgs.gov '	Enter the mail system and wait for the message to be entered.	
29	Type the message text to send to EDC and followed by enter key	The entire message will be displayed on the screen.	
30	Type "." to send the message to EDC.	'host name {user name}:' will be displayed.	
31	Enter: mail <userid at GSFC@internet mail address> <userid at LaRC@internet mail address> <userid at EDC@internet mail address >.	Enter the mail system and wait for the distribute message to be entered.	
32	Type the message text to distribute to all DAACs: GSFC, LaRC, EDC and followed by enter key	The entire message will be displayed on the screen.	
33	Type "." to send the message to three DAACs: GSFC, LaRC, EDC.	'host name {user name}:' will be displayed.	

34	Enter: rlogin <userid at LaRC> on one of the window Note: use ' userid@ecs.larc.nasa.gov '	'Enter Password:' will be displayed on the screen	
35	Enter: <password>	'host name {user name}:' will be displayed.	
36	Enter: script TC2.10_larc_log.	Script started, file is TC2.10_larc_log. All input/output to the workstation will be recorded in the log_msg file.	
37	Enter: mail <userid at GSFC@internet mail address> Note: use ' userid@ecsgsfc1.gsfc.nasa.gov '	Enter the mail system and wait for the message to be entered.	
38	Type the message text to send to GSFC and followed by enter key	The entire message will be displayed on the screen.	
39	Type "." to send the message to GSFC.	'host name {user name}:' will be displayed.	
40	Enter: mail <userid at MSFC@internet mail address> Note: use ' userid@hydra.msfc.nasa.gov '	Enter the mail system and wait for the message to be entered.	
41	Type the message text to send to MSFC and followed by enter key	The entire message will be displayed on the screen.	
42	Type "." to send the message to MSFC.	'host name {user name}:' will be displayed.	
43	Enter: mail <userid at EDC@internet mail address> Note: use ' userid@ecs-hp1.cr.usgs.gov '	Enter the mail system and wait for the message to be entered.	
44	Type the message text to send to EDC and followed by enter key	The entire message will be displayed on the screen.	
45	Type "." to send the message to EDC and followed by enter key.	'host name {user name}:' will be displayed.	
46	Enter: mail <userid at GSFC@internet mail address> <userid at MSFC@internet mail address> <userid at EDC@internet mail address >.	Enter the mail system and wait for the distribute message to be entered.	
47	Type the distribute message text to send to all other DAACs : GSFC, MSFC, EDC	The entire message will be displayed on the screen.	
48	Type "." to send the message to three other DAACs: GSFC, MSFC, EDC.	'host name {user name}:' will be displayed.	
49	Enter: rlogin <userid at EDC> on one of the window Note: use ' userid@ecs-hp1.cr.usgs.gov '	'Enter Password:' will be displayed on the screen	
50	Enter: <password>	'host name {user name}:' will be displayed.	

51	Enter: script TC2.10_edc_log	Script started, file is TC2.10_edc_log. All input/output to the workstation will be recorded in the log_msg file.	
52	Enter: mail <userid at GSFC@internet mail address> Note: use ' userid@ecsgsfc1.gsfc.nasa.gov '	Enter the mail system and wait for the message to be entered.	
53	Type the message text to send to GSFC and followed by enter key	The entire message will be displayed on the screen.	
54	Press "." to send the message to GSFC	'host name {user name}:' will be displayed.	
55	Enter: mail <userid at MSFC@internet mail address> Note: use ' userid@hydra.msfc.nasa.gov '	Enter the mail system and wait for the message to be entered.	
56	Type the message text to send to MSFC and followed by enter key	The entire message will be displayed on the screen.	
57	Press "." to send the message to MSFC.	'host name {user name}:' will be displayed.	
58	Enter: mail <userid at LaRC@internet mail address> Note: use ' userid@ecs.larc.nasa.gov '	Enter the mail system and wait for the message to be entered.	
59	Type the message text to send to LaRC and followed by enter key	The entire message will be displayed on the screen.	
60	Type "." to send the message to LaRC	'host name {user name}:' will be displayed.	
61	Enter: mail <userid at GSFC@internet mail address> <userid at MSFC@internet mail address> <userid at LaRC@internet mail address >.	Enter the mail system and wait for the distribute message to be entered.	
62	Type the message text to distribute to three DAACs: GSFC, MSFC, LaRC and followed by enter key	The entire message will be displayed on the screen.	
63	Press "." to send the message to three DAACs: GSFC, MSFC, LaRC.	'host name {user name}:' will be displayed.	
64	Enter: mail on the " GSFC " window	A mail message will be displayed on the screen followed by '?'. '?' will be prompted	
65	Enter: s edc_gsfc_d Note This is the distributed message received from EDC.		
66	Hit "Enter" for the next mail message to display	The next mail message is displayed	

67	Enter: s edc_gsfc_i Note This is an individual message received from EDC.	'?' will be prompted	
68	Hit "Enter" for the next mail message to display	The next mail message is displayed	
69	Enter: s larc_gsfc_d Note This is the distributed message received from LaRC.	'?' will be prompted	
70	Hit "Enter" for the next mail message to display	The next mail message is displayed	
71	Enter: s larc_gsfc_i Note This is an individual message received from LaRC.	'?' will be prompted	
72	Hit "Enter" for the next mail message to display	The next mail message is displayed	
73	Enter: s msfc_gsfc_d Note This is the distributed message received from MSFC	'?' will be prompted	
74	Hit "Enter" for the next mail message to display	The next mail message is displayed	
75	Enter: s msfc_gsfc_i Note This is an individual message received from MSFC	'?' will be prompted	
76	Enter: q , if necessary	'host name {user name}:' will be displayed	
77	Enter: cat msfc_gsfc_i to display the message	A mail message will be displayed on the screen.	The mail message received by GSFC will be compared to verify that the message is not corrupted after being transferred.
78	Enter: cat larc_gsfc_i to display the message	A mail message will be displayed on the screen.	The mail message received by GSFC will be compared to verify that the message is not corrupted after being transferred.

79	Enter: cat edc_gsfc_i to display the message	A mail message will be displayed on the screen.	The mail message received by GSFC will be compared to verify that the message is not corrupted after being transferred.
80	Enter: cat msfc_gsfc_d to display the message	A mail message will be displayed on the screen.	The mail message received by GSFC will be compared to verify that the message is not corrupted after being transferred.
81	Enter: cat larc_gsfc_d to display the message	A mail message will be displayed on the screen.	The mail message received by GSFC will be compared to verify that the message is not corrupted after being transferred.
82	Enter: cat edc_gsfc_d to display the message	A mail message will be displayed on the screen.	The mail message received by GSFC will be compared to verify that the message is not corrupted after being transferred.
83	Press exit on GSFC workstation to stop recording the I/O.	Script done, file is "TC2.10_gsfc_log"	
84	Enter: lpr -P <printer name> <file name>	The script file will be printed	
85	Enter: exit to leave the GSFC	Back to EDF	
86	Click the upper left corner of the window.	A Menu will be displayed.	
87	Select the ' close '	Window for GSFC is closed	
88	Enter: mail on the " MSFC " window	A mail message will be displayed on the screen followed by '?'. '?' will be prompted	
89	Enter: s edc_msfc_d Note This is the distributed message received from EDC.		
90	Hit "Enter" for the next mail message to display	The next mail message is displayed	
91	Enter: s edc_msfc_i Note This is an individual message received from EDC.	'?' will be prompted	
92	Hit "Enter" for the next mail message to display	The next mail message is displayed	

93	Enter: s larc_msfc_d Note This is the distributed message received from LaRC.	'?' will be prompted	
94	Hit "Enter" for the next mail message to display	The next mail message is displayed	
95	Enter: s larc_msfc_i Note This is an individual message received from LaRC.	'?' will be prompted	
96	Hit "Enter" for the next mail message to display	The next mail message is displayed	
97	Enter: s gsfc_msfc_d Note This is the distributed message received from GSFC	'?' will be prompted	
98	Hit "Enter" for the next mail message to display	The next mail message is displayed	
99	Enter: s gsfc_msfc_i Note This is an individual message received from GSFC	'?' will be prompted	
100	Enter: q , if necessary	'host name {user name}:' will be displayed	
101	Enter: cat gsfc_msfc_i to display the message	A mail message will be displayed on the screen.	The mail message received by MSFC will be compared to verify that the message is not corrupted after being transferred.
102	Enter: cat larc_msfc_i to display the message	A mail message will be displayed on the screen.	The mail message received by MSFC will be compared to verify that the message is not corrupted after being transferred.
103	Enter: cat edc_msfc_i to display the message	A mail message will be displayed on the screen.	The mail message received by MSFC will be compared to verify that the message is not corrupted after being transferred.
104	Enter: cat gsfc_msfc_d to display the message	A mail message will be displayed on the screen.	The mail message received by MSFC will be compared to verify that the message is not corrupted after being transferred.

105	Enter: cat larc_msfc_d to display the message	A mail message will be displayed on the screen.	The mail message received by MSFC will be compared to verify that the message is not corrupted after being transferred.
106	Enter: cat edc_msfc_d to display the message	A mail message will be displayed on the screen.	The mail message received by MSFC will be compared to verify that the message is not corrupted after being transferred.
107	Press ctrl-d to stop recording input and output	script done, file is "TC2.10_msfc_log"	The mail message received by MSFC will be compared to verify that the message is not corrupted after being transferred.
108	Enter: lpr -P <printer name> <file name>	The script file containing input/output will be printed.	
109	Click the upper left corner of the window	A Menu will be displayed.	
110	Enter : exit to leave MSFC	Back to EDF	
111	Select the ' close '	Successful close MSFC window	
112	Enter: mail on the EDC window	A mail message will be displayed on the screen followed by '?'. '?' will be prompted	
113	Enter: s larc_edc_d Note This is the distributed message received from LaRC.		
114	Hit "Enter" for the next mail message to display	The next mail message is displayed	
115	Enter: s larc_edc_i Note This is an individual message received from LaRC.	'?' will be prompted	
116	Hit "Enter" for the next mail message to display	The next mail message is displayed	
117	Enter: s msfc_edc_d Note This is the distributed message received from MSFC	'?' will be prompted	
118	Hit "Enter" for the next mail message to display	The next mail message is displayed	

119	Enter: s msfc_edc_i Note This is an individual message received from MSFC.	'?' will be prompted	
120	Hit "Enter" for the next mail message to display	The next mail message is displayed	
121	Enter: s gsfc_edc_d Note This is the distributed message received from GSFC.	'?' will be prompted	
122	Hit "Enter" for the next mail message to display	The next mail message is displayed	
123	Enter: s gsfc_edc_i Note This is an individual message received from GSFC..	'?' will be prompted	
124	Enter: q , if necessary	'host name {user name}:' will displayed	
125	Enter: cat msfc_edc_i to display the message	A mail message will be displayed on the screen.	The mail message received by EDC will be compared to verify that the message is not modified after being transferred.
126	Enter: cat gsfc_edc_i to display the message	A mail message will be displayed on the screen.	The mail message received by EDC will be compared to verify that the message is not modified after being transferred.
127	Enter: cat larc_edc_i to display the message	A mail message will be displayed on the screen.	The mail message received by EDC will be compared to verify that the message is not modified after being transferred.
128	Enter: cat msfc_edc_d to display the message	A mail message will be displayed on the screen.	The mail message received by EDC will be compared to verify that the message is not modified after being transferred.
129	Enter: cat gsfc_edc_d to display the message	A mail message will be displayed on the screen.	The mail message received by EDC will be compared to verify that the message is not modified after being transferred.

130	Enter: cat larc_edc_dto display the message	A mail message will be displayed on the screen.	The mail message received by EDC will be compared to verify that the message is not modified after being transferred.
131	Press ctrl-d to stop recording input and output	script done, file is "TC2.10_edc_log"	
132	Enter: lpr -P <printer name> <file name>	The script file containing input/output will be printed.	
133	Enter: exit from EDC	Back to EDF	
134	Click the upper left corner of the window	A Menu will be displayed.	
135	Select the ' close ' to close the window	Successful close the window	
136	Enter: mail on the LaRC window	A mail message will be displayed on the screen followed by '?'. '?' will be prompted	
137	Enter: s edc_larc_d Note This is the distributed message received from EDC.		
138	Hit "Enter" for the next mail message to display	The next mail message is displayed	
139	Enter: s edc_larc_i Note This is an individual message received from EDC	'?' will be prompted	
138	Hit "Enter" for the next mail message to display	The next mail message is displayed	
139	Enter: s msfc_larc_d Note This is the distributed message received from MSFC	'?' will be prompted	
140	Hit "Enter" for the next mail message to display	The next mail message is displayed	
141	Enter: s msfc_larc_i Note This is an individual message received from MSFC	'?' will be prompted	
142	Hit "Enter" for the next mail message to display	The next mail message is displayed	
143	Enter: s gsfc_larc_i Note This is an individual message received from GSFC	'?' will be prompted	
144	Hit "Enter" for the next mail message to display	The next mail message is displayed	

145	Enter: s gsfc_larc_d Note This is the distributed message received from GSFC	'?' will be prompted	
146	Enter: q , if necessary	'host name {user name}:' will be displayed	
147	Enter: cat msfc_larc_i to display the message	A mail message will be displayed on the screen.	The mail message received by LaRC will be compared to verify that the message is not corrupted after being transferred.
148	Enter: cat gsfc_larc_i to display the message	A mail message will be displayed on the screen.	The mail message received by LaRC will be compared to verify that the message is not corrupted after being transferred.
149	Enter: cat edc_larc_i to display the message	A mail message will be displayed on the screen.	The mail message received by LaRC will be compared to verify that the message is not corrupted after being transferred.
150	Enter: cat msfc_larc_s to display the message	A mail message will be displayed on the screen.	The mail message received by LaRC will be compared to verify that the message is not corrupted after being transferred.
151	Enter: cat gsfc_larc_s to display the message	A mail message will be displayed on the screen.	The mail message received by LaRC will be compared to verify that the message is not corrupted after being transferred.
152	Enter: cat edc_larc_s to display the message	A mail message will be displayed on the screen.	The mail message received by LaRC will be compared to verify that the message is not corrupted after being transferred.
153	Press ctrl-d to stop recording input and output	script done, file is "TC2.10_larc_log"	
154	Enter: lpr -P <printer name> <file name>	The script file containing input/output will be printed.	
155	Enter: exit from LaRC window	Back to EDF	
156	Click the right button of the mouse	"Root Menu" will be displayed.	
157	Select the ' quit ' button and confirm the quit.	Successful logoff	

5.2.11 E-mail - Asynchronous Messaging Test Procedures (TC006.001)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Enter: (your account) on the local workstation (Nickalus) at EDF.	'Enter Password:' will be displayed on the screen	
2	Enter: <password>	'nickalus {kcampbel}:' will be displayed.	
3	Enter: cdtest		
4	Enter: ll	show files listed in this directory	
5	Enter: cd T2/T2_EMAIL_API		
6	Enter: ll	show files listed in this directory	
7	Cut and paste tCsEmMail	CsEmMail class test driver quick constructor test subject:	tCsEmMail was copied from /ecs/forma/CSS/CF/bin/sun5. Use Nitin's view under Clearcase to copy this file.
8	For subject: Enter: Test Case 2.11 <return>	'to:' will be displayed.	
9	For to: Enter: (your user account) <return>	'message:' will be displayed.	
10	Type text for the message and hit the Enter key.	"Goodbye.." will be displayed.	
11	Enter mail	The mail message will be displayed.	
12	Enter s 2.11email_api3	The mail message will be saved	
14	Enter: ll	show the file just created in step 12	
15	Enter: t1CsEmMail ininfile	"CsEmMail class test driver..." will be displayed.	The ininfile contains inputs for userid, subject, message and a file name. t1CsEmMail is a driver that will accept inputs from ininfile.
16	Enter exit to end test	Successful logoff	

5.2.12 Sending E-mail Messages to Local and Remote Hosts Test Procedures (B01.05.01)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Enter: (your userid) on the local workstation (dps3sunedf) at EDF.	'Enter Password:' will be displayed on the screen	The user accounts on the workstation should be set up as follows: Valid accounts A and B on local H1, account C on local H2 and account D on remote on remote H3 (GSFC or any DAAC).
2	Enter: <password>	'dps3sunedf {(your userid)}:' will be displayed.	
3	Enter: mail (your userid)	The mail system will wait for the message to be entered.	
4	Type a message followed by the enter key. Enter: This is a an e-mail test for Test Case 2.12.	The entire message will be displayed on the screen.	
5	Press ctrl-D keys to send the message to (your userid) on dps3sunedf.	'dps3sunedf {(your userid)}:' will be displayed.	
6	Enter: mail Note This is a message from (your userid) of EDF (dps3sunedf) to EDF (dps3sunedf)	The mail message sent to (your userid) will be displayed	
7	Enter: s edfA_edfA	'?' will be prompted	
8	Enter: q	'dps3sunedf {(your userid)}:' will be displayed.	
9	Enter: ll	to see file that was saved	
10	Enter: mail (your userid)@192.150.28.112	The mail system will wait for the message to be entered.	
11	Type a message followed by the enter key. Enter: Hello 192.150.28.116	The entire message will be displayed on the screen.	
12	Press ctrl-D keys to send the message to (your userid)	'dps3sunedf {(your userid)}:' will be displayed.	
13	rlogin to mss2sunedf : Enter: rlogin 192.150.28.112	successful login	

14	Enter: mail Note This is a message from (your userid) of EDF (dps3sunedf) to (your userid) EDF (dps3sunedf)	The mail message sent to (your userid) will be displayed	
15	Enter: s edfA_edfB	'?' will be prompted	
16	Enter: q	'dps3sunedf {(your userid)}:' will be displayed.	
17	Enter: ll	to verify that the file was created	
18	Enter: mail (lcooper)@ecsgsfc1.nasa.gov	The mail system will wait for the message to be entered.	
19	Type a message followed by the enter key.	The entire message will be displayed on the screen.	
20	Press ctrl-D keys to send the message to GSFC	'dps3sunedf {(your userid)}:' will be displayed.	
21	Click the middle button of the mouse and select the 'Start Terminal' option		
22	Enter ecsgsfc1.gsfc.nasa.gov in the service box and click the OK button	"Connecting to host ecsgsfc1.gsfc.nasa.gov... successful" followed by a login message.	
23	Enter userid: lcooper	Password:	
24	Enter <password> **get from tester**	ecsgsfc1{(your userid)}	
25	Enter: mail on ecsgsfc1	A mail message will be displayed on the screen followed by '?'.	
26	Enter: s edf_gsfc1 Note This is a message received from EDF (dps3sunedf) to GSFC DAAC.	'?' will be prompted	
27	Enter: q	'?' will be prompted	
28	Enter: ll	to verify that file was created	
29	Enter: 'ftp ecsgsfc1.gsfc.nasa.gov ' on dps3sunedf	Name(ecsgsfc1.gsfc.nasa.gov):	
30	Enter: (lcooper) and <password> on the on dps3sunedf	ftp >	
31	Enter: get edf_gsfc1	200 Port command Successful	
32	Press ctrl-D	Good Bye	
33	Enter: cp edf_gsfc /home/(your userid)/T2/	dps3sunedf {(your userid)}:	
34	Enter: cp edfA_edfA /home/(your userid)/T2/	dps3sunedf {(your userid)}:	
35	Enter: cp edfA_edfB /home/(your userid)/T2/	dps3sunedf {(your userid)}:	

36	Enter: lpr -d<watson> T2/edf_gsfc1 edfA_edfA	The script file containing input/output will be printed.	Watson printer resides in the STL at the EDF
37	Enter: exit	exit out of the window	
38	Click the right button of the mouse.	'Root Menu' will be displayed.	
39	Select the ' quit ' button and click on it.	Successful logoff	

5.2.13 Receiving E-mail Messages from Local and Remote Hosts Test Procedures (B01.05.02)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Enter: vkhatr on the local workstation (Nickalus) at EDF.	'Enter Password:' will be displayed on the screen	The user accounts on the workstation should be set up as follows: Valid accounts A and B on local H1, account C on local H2 and account D on remote on remote H3 (GSFC or any DAAC).
2	Enter: <password>	'nickalus {vkhatr}:' will be displayed.	
3	Enter: mail vkhatr	The mail system will wait for the message to be entered.	
4	Type a message followed by the enter key.	The entire message will be displayed on the screen.	
5	Press ctrl-D keys to send the message to vkhatr on nickalus.	'nickalus {vkhatr}:' will be displayed.	
6	Enter: mail Note This is a message from vkhatr of EDF (Nickalus) to EDF (Nickalus)	The mail message sent to vkhatr will be displayed	
7	Enter: s edfA_edfA	'?' will be prompted	
8	Enter: q	'nickalus {vkhatr}:' will be displayed.	
9	Enter: mail kcambel@chichi.eos.hitc.com	The mail system will wait for the message to be entered.	
10	Type a message followed by the enter key.	The entire message will be displayed on the screen.	
11	Press ctrl-D keys to send the message to kcambel	'nickalus {vkhatr}:' will be displayed.	
12	Logon chichi with tcampbel's account and enter: mail Note This is a message from vkhatr of EDF (Nickalus) to kcambel EDF (Chichi)	The mail message sent to kcambel will be displayed	
13	Enter: s edfA_edfB	'?' will be prompted	

14	Enter: q	'nickalus {vkhatr}:' will be displayed.	
15	Enter: mail vkhatr@ecsgsf1.nasa.gov	The mail system will wait for the message to be entered.	
16	Type a message followed by the enter key.	The entire message will be displayed on the screen.	
17	Press ctrl-D keys to send the message to GSFC	'nickalus {vkhatr}:' will be displayed.	
18	Click the middle button of the mouse and select the 'Start Terminal option		
19	Enter ecsgsf1.gsfc.nasa.gov in the service box and click the OK button	"Connecting to host ecsgsf1.gsfc.nasa.gov... successful" followed by a login message.	
20	Enter vkhatr	Password:	
21	Enter <password>	ecsgsf1{vkhatr}	
22	Enter: mail on ecsgsf1	A mail message will be displayed on the screen followed by '?'.	
23	Enter: s edf_gsfc Note This is a message received from EDF (Nickalus) to GSFC DAAC.	'?' will be prompted	
24	Enter: q	'?' will be prompted	
25	Enter: 'ftp ecsgsf1.gsfc.nasa.gov ' on Nickalus	Name{ecsgsf1.gsfc.nasa.gov}:	
26	Enter: vkhatr and <password> on the on Nickalus	ftp >	
27	Enter: get edf_gsfc	200 Port command Successful	
28	Press ctrl-d	Good Bye nickalus {vkhatr}:	
29	Enter: cp edf_gsfc /home/vkhatr/T2/	nickalus {vkhatr}:	
30	Enter: cp edfA_edfA /home/vkhatr/T2/	nickalus {vkhatr}:	
31	Enter: cp edfA_edfB /home/vkhatr/T2/	nickalus {vkhatr}:	
32	Enter: lpr -P <printer name> T2/edf_gsfc edfA_edfA	The script file containing input/output will be printed.	
33	Click the right button of the mouse.	'Root Menu' will be displayed.	
34	Select the 'quit' button and click on it.	Successful logoff	

5.2.14 Client/User File Transfer Test Procedures (TC009.001)

Step No.	Step Description / Operator Action	Expected Results	Observations / Comments
1	Verify that test accounts(login ids and passwords) are setup on all Ir1 DAAC workstations.(EDF -edf, GSFC - ecsgsfc1, ecs-global, LaRC - ecs, and EDC - ecs- hp).	'Enter login id: should be displayed on the screen	
2	Enter: < login id at EDF> on dps3sunedf.	'Password' will be displayed on the screen	
3	Enter: <password>	'host name {user name}:' will be displayed on the screen	
4	Enter: setenv DISPLAY <machine name>:0.0	sets terminal environment	
5	Enter: script log_msg	All input/output to the workstation will be recorded in the log_msg file.	
6	Enter rlogin ecsgsfc1.gsfc.nasa.gov	'Password:' will be displayed on the screen	This is remotely logging into the workstation at GSFC
7	Enter <password> on the workstation at GSFC.	'host name {user name}:' for the workstation at GSFC will de displayed on the screen	
8	Enter ftp	Start the FTP session 'ftp>' will be displayed	
9	Enter open	'(to)' will be displayed	
10	Enter: ecsgsfc1.gsfc.nasa.gov	'Name (host name:user name):' will be displayed	
11	Enter <userid>	'Password:' will be displayed	
12	Enter <password>	'User <user id> logged in. 'ftp>' should be displayed	
13	Enter ascii to set the transfer type to ascii	'Type set to A.' will be displayed	A stands for "ASCII" or "text"
14	Enter pwd to show what directory are you currently in	Displayed will be your current directory	
15	Enter dir to get a list of the files on the remote site. Enter ls -a get a list of all files including hidden	With the dir command a list of files with the permission attribute will be displayed. For ls-a just a list of files including hidden will be displayed. For both it will also show long it took to complete the command	

16	Enter hash	'Hash mark printing on (8192 bytes/hash mark). Note it is believed that the actual number may be different depending on the system used.	
17	Enter put to send 1 file to the remote directory.	You will get the following messages. message stating that the command was successful. What type of connection was it (ascii or binary), the name of the file sent, and also how long did the transfer took.	Enter dir in both directories to make sure that the file is the same size in both locations.
18	Enter prompt, this cause mput to send multiple files all at once without stopping between each file asking do you want to send it.	Prompt mode will be turn off	
19	Repeat step 18 with prompt mode off. When finished enter prompt to turn mode back on	You will receive the same messages as in step 17 X times	Enter dir in both directories to make sure that all files are the same size in both locations.
20	Enter get to receive a file from the remote site	You will get the following messages. message stating that the command was successful. What type of connection was it (ascii or binary), the name of the file received, and also how long did the transfer took.	Enter dir in both directories to make sure that the file is the same size in both locations. Check to see if you receive the proper # of hash marks. Which will be Total byte of file /(8192 or the correct number)
21	Enter prompt, this cause mget to receive multiple files all at once without stopping between each file asking do you want to send it.	Prompt mode will be turn off	
22	Enter binary change the transfer mode to binary	'Type set to l' will be displayed	l stands for "image" or "binary"
23	Repeat steps 17 through 24 doing the same above steps with binary files as was done with ascii files previously		
24	Enter dir to check the permission status for the files		
25	Enter chmod to change the executable permission for a file.	For whatever file you changed if it had executable privilege before it shouldn't now and if it did not have executable privilege it should now	Enter dir to verify chmod command
26	Enter delete to delete a file.	Should be able to delete a file from the remote directory	Enter dir to verify that the file was deleted

27	Enter mdelete to delete multiple files	Should be able to delete multiple files	Enter dir to verify that all files were deleted
28	Enter mkdir to make a new directory on the remote site.	Should be able to create a new directory	Try to cd into this directory to verify this. Then do a cd .. to get back to your old directory
29	Enter rmdir to remove the directory you just made.	Should not be able to enter the deleted directory and it should not be shown in any listings anymore	Type dir to verify this and also try to cd into the directory you deleted.
30	Enter close to end the session with ecsgsfc1	Terminate session with ecsgsfc1	
31	Enter bye to terminate FTP	Close FTP	
32	Remote login at LaRC and repeat steps 5 thru 34 2 times for the 2 workstations at Langley Enter: rlogin ecs.larc.nasa.gov	Should be able to connect and do all FTP commands with LARC	
33	Remote login at EDC and repeat steps 5 thru 34 2 times for the 2 workstations at EDC Enter: rlogin ecs-hp1.cr.usgc.gov	Should be able to connect and do all FTP commands with EDC	
34	Enter exit to logout		
35	Complete test log and end test		

5.2.15 Transmit File from EDF to GSFC(ftp) Test Procedures (T01-02.04.01)

Step No.	Step Description / Operator Action	Expected Results	Observations / Comments
1	Verify that test accounts (login ids and passwords) are setup on the IR1 workstation at EDF and GSFC.	'Enter login id:' should be displayed on the screen	
2	Login to dps3sunedf	'Password:' will be displayed on the screen	
3	Enter: <password>	'host name {user name}:' will be displayed on the screen	
4	cdtest	switches to /lr1_IT directory	
5	Enter: script TC2.15_log	All input/output to the workstation will be recorded in TC2.15_log file.	
6	Enter: ls -al	get a list of all files	
7	Enter: ftp	'ftp>' will be displayed	Start the FTP session
8	Enter open	'(to)' will be displayed	
9	Enter: dps3sunedf.gsfc.nasa.gov	'Name (host name: user name):' will be displayed	
10	Enter <userid>	'Password:' will be displayed	
11	Enter <password>	'User <user id> logged in' 'ftp>' will be displayed	
12	Enter: cd /lr1_IT	'CWD command successful' will be displayed	
13	Enter: dir	A list of the directory will be displayed this will show the privileges and the file size for each file	
14	Enetr: hash	Hash mark printing on (8192 bytes/hash mark). Note it is believed tha the actual number may be different depending on the system.	
15	Enter: put <filename>	You will get the following messages stating that the command was successful. What type of connection it was either ascii or binary.	
16	Enter: mput <filenames>	To send multiple files to the remote directory	
17	Enter: prompt	Prompt mode will be torned off.	
18	Repeat step 16 with propmt mode off. When finished, turn propmt back on.		

19	Enter: binary	Type set 'I' will be displayed.	
20	Repeat steps 15 through 18 doing the same steps with binary files.		
21	Enter: ascii	Type set 'A' will be displayed.	
22	Enter: get <filename>	Receive a file from the remote site.	
23	Enter: mget <filenames>	Receive multiple files from remote host.	
24	Enter: prompt	Prompt mode will be turned off.	
25	Repeat step 23 with prompt mode off		
26	Enter: binary	Type set 'I' will be displayed.	
27	Repeat steps 22 through 25 doing the same steps with binary files.		
28	Enter: prompt	Prompt mode will turned on.	
29	Enter: dir	list of files will be displayed	
30	Enter: mdelete <filenames>	Deletes multiple files	
31	Enter: close	Closes FTP session	
32	Enter: bye	Exits FTP	
33	Enter exit		
34	complete test log / end test		

5.2.16 Transmit File from EDF to LaRC(ftp) Test Procedures (T01-02.04.02)

Step No.	Step Description / Operator Action	Expected Results	Observations / Comments
1	Verify that test accounts (login ids and passwords) are setup on the IR1 workstation at EDF(H1) and LARC(H2).	'Enter login id:' should be displayed on the screen	
2	Login to dps3sunedf	'Password:' will be displayed on the screen	
3	Enter: <password>	'host name {user name}:' will be displayed on the screen	
4	Create or copy a data file to the account in step 1.		
5	Enter: script TC2.16_log	All input/output to the workstation will be recorded.	
6	Enter: rlogin ecs.larc.nasa.gov	'Password:' will be displayed on the screen	
7	Enter : kcampbel : <kcampbel> password	'host name {user name}' for the workstation.	
8	Enter ftp	'ftp>' will be displayed	Start the FTP session
9	Enter open	'(to)' will be displayed	
10	Enter : ecs.larc.nasa.gov	'Name (host name: user name):' will be displayed	
11	Enter <userid>	'Password:' will be displayed	
12	Enter <password>	'User <user id> logged in' 'ftp>' will be displayed	
13	Enter : ls -al	'CWD command successful' will be displayed	
14	Enter: hash	Hash mark print is 8192 bytes/hash mark.	
15	Enter : put (to transfer the test file from account1 to account2	You will get the following messages: 1. 'PORT command successful' 2. What type ASCII or BINARY 3. Message stating name of file on local and name of file just sent to remote 4. Time the transfer took	

16	Enter : dir	A list of the directory will be displayed this will show the privileges and the file size for each file	
17	Enter: prompt	Prompt mode is turned off	
18	Enter: Repeat 16 without prompt mode off		
19	Enter: binary	Type set to 'I' will be displayed	
20	Repeat steps 15 through 18 doing the same above steps.		
21	Enter: ascii	Type set to 'A' will be displayed	
22	Enter: get <filename>		
23	Enter: prompt	Prompt mode will turned on	
24	Enter: dir	list of files on the remote site	
25	Enter: delete <filename>	deletes ftp'ed files	
26	Enter close to end the session	to end the session	
27	Enter bye to terminate FTP	Exit FTP	
28	Enter exit		
29	complete test log / end test		

5.2.17 Transmit File from EDF to MSFC(ftp) Test Procedures (T01-02.04.03)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Verify that test accounts (login ids and passwords) are setup on the IR1 workstation at EDF(H1) and MSFC(H2).	'Enter login id:' should be displayed on the screen	
2	Enter: <login id at H1> on the workstation at H1	'Password:' will be displayed on the screen	
3	Enter: <password> on the workstation at H1	'host name {user name}:' will be displayed on the screen	
4	Create or copy a data file to the account in step 1.		
5	Enter script log_msg on the workstation at H1.	All input/output to the workstation will be recorded in the log_msg file.	
6	Enter: rlogin <host name at H2> on the workstation at H2	'Password:' will be displayed on the screen	
7	Enter <password> on the workstation at H2	'host name {user name}' for the workstation at H2 will be displayed on the screen.	
8	Enter ftp	'ftp>' will be displayed	Start the FTP session
9	Enter open	'(to)' will be displayed	
10	Enter <host name> of the workstation at H2.	'Name (host name: user name):' will be displayed	
11	Enter <userid>	'Password:' will be displayed	
12	Enter <password>	'User <user id> logged in' 'ftp>' will be displayed	
13	Enter cd <path> to change to the directory where data file will be sent to	'CWD command successful' will be displayed	
14	Enter put to transfer the test file from H1 to H2	You will get the following messages: 1. 'PORT command successful' 2. What type ASCII or BINARY 3. Message stating name of file on local and name of file just sent to remote 4. Time the transfer took	

15	Enter dir on both directories to compare the files	A list of the directory will be displayed this will show the privileges and the file size for each file	The file at H1 and H2 should be the same
16	Record or print out the history log file on both H1 and H2	History files of both H1 & H2 shall contain the resource usage, response time, and the number of transactions.	
17	Enter close to end the session with H2		
18	Enter ftp to terminate FTP	Close FTP	
19	Enter logout to logout at H1		
20	complete test log / end test		

5.2.18 Transmit File from EDF to EDC(ftp) Test Procedures (T01-02.04.04)

Step No.	Step Description / Operator Action	Expected Results	Observations / Comments
1	Verify that test accounts (login ids and passwords) are setup on the IR1 workstation at EDF(H1) and EDC(H2).	'Enter login id:' should be displayed on the screen	
2	Login to dps3sunedf	'Password:' will be displayed on the screen	
3	Enter: <password>	'host name {user name}:' will be displayed on the screen	
4	cd /data3/aster/run/cal_lut and copy the following files to your home directory: cp act_proto_1_us76_sprt.dat /home/kcampbel cp brightness_temp.lut /home/kcampbel	There are two files in this diretdtory that will be used for: 1) ascii file transfer: act_proto_1_us76_sprt.dat 2) binary file transfer: brightness_temp.lut	
5	cd <return>	Get back to your home area	
6	Enter: script TC2.18_log	All input/output to the workstation will be recorded.	
7	Enter: rlogin ecs-hp1.cr.usgs.gov	'Password:' will be displayed on the screen	
8	Enter : kcampbel for <password>	'host name {user name}' for the workstation.	
9	Enter ftp	'ftp>' will be displayed	Start the FTP session
10	Enter open	'(to)' will be displayed	
11	Enter : ecs-hp1.cr.usgs.gov	'Name (host name: user name):' will be displayed	
12	Enter <userid>	'Password:' will be displayed	
13	Enter <password>	'User <user id> logged in' 'ftp>' will be displayed	
14	Enter : ls -al	'CWD command successful' will be displayed	
15	Enter: hash	Hash mark print is 8192 bytes/hash mark.	

16	Enter : put (to transfer the test file from account1 to account2	You will get the following messages: 1. 'PORT command successful' 2. What type ASCII or BINARY 3. Message stating name of file on local and name of file just sent to remote 4. Time the transfer took	
17	Enter : dir	A list of the directory will be displayed this will show the privileges and the file size for each file	
18	Enter: prompt	Prompt mode is turned off	
19	Enter: Repeat 16 without prompt mode off		
20	Enter: binary	Type set to 'I' will be displayed	
21	Repeat steps 15 through 18 doing the same above steps.		
22	Enter: ascii	Type set to 'A' will be displayed	
23	Enter: get <filename>		
24	Enter: prompt	Prompt mode will turned on	
25	Enter: dir	list of files on the remote site	
26	Enter: delete <filename>	deletes ftp'ed files	
27	Enter close to end the session	to end the session	
28	Enter bye to terminate FTP	Exit FTP	
29	Enter: exit		
30	complete test log / end test		

5.2.19 Transmit File from EDF to GSFC(rcp) Test Procedures (T0102.04.05)

Step No.	Step Description / Operator Action	Expected Results	Observations / Comments
1	Verify that test accounts (login ids and passwords) are setup on the IR1 workstation at EDF(H1) and GSFC(H2).	'Enter login id:' should be displayed on the screen	A limitation of rcp is that the user must have an account on both the send and the receive machines and the passwords have to be the same.
2	Enter: <login id at H1> on the workstation at H1	'Password:' will be displayed on the screen	
3	Enter: <password> on the workstation at H1	'host name {user name}:' will be displayed on the screen	
4	Create or copy a text data file, a ascii data file and a binary data file to the account in step 1.		
5	Enter script log_msg on the workstation at H1.	All input/output to the workstation will be recorded in the log_msg file.	
6	Enter rlogin (H2) Enter <password>	'Password:' will be displayed	
7	In the home directory type ls -la .rhosts to make sure this files exists. Enter more .rhosts to see what in this file. You need the line "+ <username>" to be in the file		
8	cd to the directory where the test data is going to make sure it exists and Enter ls to see what files if any are there now		
9	Enter logout to exit H2		
10	Enter cd <directory where data file exists on H1>	<directory where data file exists> will be displayed	
11	Enter dir on H1 to verify that test files are there		
12	Enter rcp <test text file> <Host name of H2:path on H2> ex (rcp testfile.1 pete:/home/dhickman/temporary		
13	Enter rcp <test ascii file> <Host name of H2:path on H2>		

14	Enter rcp <test ascii file> <Host name of H2:path on H2>		
15	Enter: rlogin <host name at H2> on the workstation at H2	'Password:' will be displayed on the screen	
16	Enter <password> on the workstation at H2	'host name {user name}' for the workstation at H2 will be displayed on the screen.	
17	Enter cd <path on H2>	'<path on H2.>' will be displayed	
18	Enter dir on H2	A list of the directory should show the 3 files that were sent over and should the same size as the original files	
19	Enter logout to exit H2		
20	Enter cd <path of test files>		
21	Enter rm <txt file> <ascii file> <binary file> to remove the files from the test file directory		
22	Enter rcp <Host name of H2:path on H2/test txt file> <path of test data> ex (rcp pete:/home/dhickman/temporary/testfile.1 /lr1_IT/rcp_data		
23	Enter rcp <Host name of H2:path on H2/test ascii file> <path of test data>		
24	Enter rcp <Host name of H2:path on H2/test binary file> <path of test data>		
25	Enter ls to verify that you receive all three files from the remote site		
26	Enter exit to stop the log file		
27	Enter lpr log_msg to print out the log file		
28	Enter logout to logout at H1		
29	complete test log / end test		

5.2.20 Transmit File from EDF to LaRC(rcp) Test Procedures (T01-02.04.06)

Step No.	Step Description / Operator Action	Expected Results	Observations / Comments
1	Verify that test accounts (login ids and passwords) are setup on the IR1 workstation at EDF(H1) and LaRC(H2).	'Enter login id:' should be displayed on the screen	
2	Enter: <login id at H1> on the workstation at H1	'Password:' will be displayed on the screen	
3	Enter: <password> on the workstation at H1	'host name {user name}:' will be displayed on the screen	
4	Create or copy a text data file, a ascii data file and a binary data file to the account in step 1.		
5	Enter script log_msg on the workstation at H1.	All input/output to the workstation will be recorded in the log_msg file.	
6	Enter rlogin (H2) Enter <password>	'Password:' will be displayed	
7	In the home directory type ls -la .rhosts to make sure this files exists. Enter more .rhosts to see what in this file. You need the line "+ <username>" to be in the file		
8	cd to the directory where the test data is going to make sure it exists and Enter ls to see what files if any are there now		
9	Enter logout to exit H2		
10	Enter cd <directory where data file exists on H1>	<directory where data file exists> will be displayed	
11	Enter dir on H1 to verify that test files are there		
12	Enter rcp <test text file> <Host name of H2:path on H2> ex (rcp testfile.1 pete:/home/dhickman/temporary		
13	Enter rcp <test ascii file> <Host name of H2:path on H2>		

14	Enter rcp <test ascii file> <Host name of H2:path on H2>		
15	Enter: rlogin <host name at H2> on the workstation at H2	'Password:' will be displayed on the screen	
16	Enter <password> on the workstation at H2	'host name {user name}' for the workstation at H2 will be displayed on the screen.	
17	Enter cd <path on H2>	'<path on H2.>' will be displayed	
18	Enter dir on H2	A list of the directory should show the 3 files that were sent over and should the same size as the original files	
19	Enter logout to exit H2		
20	Enter cd <path of test files>		
21	Enter rm <txt file> <ascii file> <binary file> to remove the files from the test file directory		
22	Enter rcp <Host name of H2:path on H2/test txt file> <path of test data> ex (rcp pete:/home/dhickman/temporary/testfile.1 /lr1_IT/rcp_data		
23	Enter rcp <Host name of H2:path on H2/test ascii file> <path of test data>		
24	Enter rcp <Host name of H2:path on H2/test binary file> <path of test data>		
25	Enter ls to verify that you receive all three files from the remote site		
26	Enter exit to stop the log file		
27	Enter lpr log_msg to print out the log file		
28	Enter logout to logout at H1		
29	complete test log / end test		

5.2.21 Transmit File from EDF to MSFC(rcp) Test Procedures (T01-02.04.07)

Step No.	Step Description / Operator Action	Expected Results	Observations / Comments
1	Verify that test accounts (login ids and passwords) are setup on the IR1 workstation at EDF(H1) and MSFC(H2).	'Enter login id:' should be displayed on the screen	
2	Enter: <login id at H1> on the workstation at H1	'Password:' will be displayed on the screen	
3	Enter: <password> on the workstation at H1	'host name {user name}:' will be displayed on the screen	
4	Create or copy a text data file, a ascii data file and a binary data file to the account in step 1.		
5	Enter script log_msg on the workstation at H1.	All input/output to the workstation will be recorded in the log_msg file.	
6	Enter rlogin (H2) Enter <password>	'Password:' will be displayed	
7	In the home directory type ls -la .rhosts to make sure this files exists. Enter more .rhosts to see what in this file. You need the line "+ <username>" to be in the file		
8	cd to the directory where the test data is going to make sure it exists and Enter ls to see what files if any are there now		
9	Enter logout to exit H2		
10	Enter cd <directory where data file exists on H1>	<directory where data file exists> will be displayed	
11	Enter dir on H1 to verify that test files are there		
12	Enter rcp <test text file> <Host name of H2:path on H2> ex (rcp testfile.1 pete:/home/dhickman/temporary		
13	Enter rcp <test ascii file> <Host name of H2:path on H2>		

14	Enter rcp <test ascii file> <Host name of H2:path on H2>		
15	Enter: rlogin <host name at H2> on the workstation at H2	'Password:' will be displayed on the screen	
16	Enter <password> on the workstation at H2	'host name {user name}' for the workstation at H2 will be displayed on the screen.	
17	Enter cd <path on H2>	'<path on H2.>' will be displayed	
18	Enter dir on H2	A list of the directory should show the 3 files that were sent over and should the same size as the original files	
19	Enter logout to exit H2		
20	Enter cd <path of test files>		
21	Enter rm <txt file> <ascii file> <binary file> to remove the files from the test file directory		
22	Enter rcp <Host name of H2:path on H2/test txt file> <path of test data> ex (rcp pete:/home/dhickman/temporary/testfile.1 /lr1_IT/rcp_data		
23	Enter rcp <Host name of H2:path on H2/test ascii file> <path of test data>		
24	Enter rcp <Host name of H2:path on H2/test binary file> <path of test data>		
25	Enter ls to verify that you receive all three files from the remote site		
26	Enter exit to stop the log file		
27	Enter lpr log_msg to print out the log file		
28	Enter logout to logout at H1		
29	complete test log / end test		

5.2.22 Transmit File from EDF to EDC(rcp) Test Procedures (T01-02.04.08)

Step No.	Step Description / Operator Action	Expected Results	Observations / Comments
1	Verify that test accounts (login ids and passwords) are setup on the IR1 workstation at EDF(H1) and GSFC(H2).	'Enter login id:' should be displayed on the screen	
2	Enter: <login id at H1> on the workstation at H1	'Password:' will be displayed on the screen	
3	Enter: <password> on the workstation at H1	'host name {user name}:' will be displayed on the screen	
4	Create or copy a text data file, a ascii data file and a binary data file to the account in step 1.		
5	Enter script log_msg on the workstation at H1.	All input/output to the workstation will be recorded in the log_msg file.	
6	Enter rlogin (H2) Enter <password>	'Password:' will be displayed	
7	In the home directory type ls -la .rhosts to make sure this files exists. Enter more .rhosts to see what in this file. You need the line "+ <username>" to be in the file		
8	cd to the directory where the test data is going to make sure it exists and Enter ls to see what files if any are there now		
9	Enter logout to exit H2		
10	Enter cd <directory where data file exists on H1>	<directory where data file exists> will be displayed	
11	Enter dir on H1 to verify that test files are there		
12	Enter rcp <test text file> <Host name of H2:path on H2> ex (rcp testfile.1 pete:/home/dhickman/temporary		
13	Enter rcp <test ascii file> <Host name of H2:path on H2>		

14	Enter rcp <test ascii file> <Host name of H2:path on H2>		
15	Enter: rlogin <host name at H2> on the workstation at H2	'Password:' will be displayed on the screen	
16	Enter <password> on the workstation at H2	'host name {user name}' for the workstation at H2 will be displayed on the screen.	
17	Enter cd <path on H2>	'<path on H2.>' will be displayed	
18	Enter dir on H2	A list of the directory should show the 3 files that were sent over and should the same size as the original files	
19	Enter logout to exit H2		
20	Enter cd <path of test files>		
21	Enter rm <txt file> <ascii file> <binary file> to remove the files from the test file directory		
22	Enter rcp <Host name of H2:path on H2/test txt file> <path of test data> ex (rcp pete:/home/dhickman/temporary/testfile.1 /lr1_IT/rcp_data		
23	Enter rcp <Host name of H2:path on H2/test ascii file> <path of test data>		
24	Enter rcp <Host name of H2:path on H2/test binary file> <path of test data>		
25	Enter ls to verify that you receive all three files from the remote site		
26	Enter exit to stop the log file		
27	Enter lpr log_msg to print out the log file		
28	Enter logout to logout at H1		
29	complete test log / end test		

5.2.23 Anonymous ftp Test Procedures (TC009.003)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Enter: <userid> on dps3sunedf.	'Password' will be displayed on the screen	
2	Enter: < password> on dps3sunedf.	'host name {user name}:' will be displayed on the screen	
3	Enter: cdtest	to get to the lr1_IT directory	
4	Enter: ll	to display files	
5	Enter: ftp ftp.uu.net on dps3sunedf.	Connected to ftp.uu.net Name (ftp.uu.net: userid);	
6	Enter: anonymous on dps3sunedf.	Guest login ok, send your e-mail complete e-mail password. Password:	
7	Enter: < e-mail address> as password on dps3sunedf.	'Welcome to UUNET archive.....' will be displayed on the screen. ftp>	
8	Enter: dir on dps3sunedf.	Port command successful Opening ASCII mode data connection for /bin/l List of files will be listed. ftp>	
9	Enter ll on dps3sunedf	?invalid command ftp>	
10	Enter: ls -l on dps3sunedf	Port command successful Opening ASCII mode data connection for file list List of files will be listed. ftp>	
11	Enter cd usenet on dps3sunedf	Port command successful Opening ASCII mode data connection for file list List of files will be listed. ftp>	
12	Enter get ls-IR.Z on dps3sunedf and immediately hit Cntl-C	Transfer aborted. Data connection closed Abort successful	

13	Enter get ls-IR.Z on dps3sunedf	Port command successful Opening ASCII mode data connection for ls-IR.Z (877671 bytes) Transfer complete local :ls-IR.Z remote: ls-IR.Z 881205 bytes received in 60 seconds (14kbytes/s) ftp>	
14	Enter: Cntl-D on dps3sunedf	Goodbye dps3sunedf{userid}:	
15	Enter: exit on dps3sunedf	Successful logoff	

5.2.24 Application File Transfer Test Procedures (TC009.004)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Check the Developers notes to see the amount of unit level testing that was done.		
2	Verify that there are test accounts setup on all of the IR1 implemented DAAC workstations. (EDF - edf-bb, epserver, GSFC - ecsgsfc1, ecs-global, MSFC - hydra, meteor, LaRC - ecs, nephos).		
3	Set up test accounts for those workstations in step 2 that do not have accounts.		
4	Enter dce login <userid at lr1edf-bb>	'Enter Password:' will be displayed on the screen	
5	Enter: <password> on the workstation at EDF.	'host name {user name}:' will be displayed	
6	Enter: script log_msg on the workstation at EDF	All input/output to the workstation will be recorded in the log_msg file	
7	Using edf-bb as the server, create data files to initialize the transfers of various file sizes to each of the IR1 workstation.		There should be data files in each of the different formats needed to use the different type applications on IR1
8	Open up a IR1 application		
9	Send a test file to the GSFC DAAC by command line user interface (CHUI) using API		Note on 9,10,11 + 12. Some application may be set up for GUI only some for CHUI only and some may be setup for both.
10	Send a test file to the GSFC DAAC by GUI using API		
11	Receive a test file to the GSFC DAAC by CHUI using API		
12	Receive a test file to the GSFC DAAC by GUI using API		
13	Set up the application so it is sending the test file to GSFC every hour		The only thing the user should have to do is enter the frequency. Every thing should be set with the API

14	Set up the application so it is receiving a test file to GSFC every hour		The only thing the user should have to do is enter the frequency. Every thing should be set with the API
15	After every hour and at the end of the test check status of tests 13 and 14. Proceed with the rest of the test while the timed transfers are going on		Note: Unknown how many hours we want to test this feature and whether we want to send a file every hour 1 or 2 days straight or longer.
16	Repeat steps 8 to 15 for transaction between all the other offsite DAAC sites. (MSFC,LaRC, and EDC)		
17	Repeat steps 8 thru 16 X times for the number of applications that this feature needs to be tested with		Currently it is unknown how many applications will be on the system and which ones have to be checked. It is assumed that at least 1 of each type will be checked
18	Enter rlogin <site at GSFC>	'Enter Password:' will be displayed on the screen.	
19	Enter: <password> on the workstation at GSFC	'host name {user name}:' will be displayed	
20	Repeat steps 8 thru 17 (substitute EDF for GSFC in steps 9-14)		
21	Enter logout	'Connection closed.' 'host name {user name}:' will be displayed	
22	Repeat steps 18 thru 21 for MSFC, LARC, and EDC each		
23	Enter logout to logout of workstation at EDF		
24	Complete test log and the test		

5.2.25 Network Filtering Test Procedures (BC002.003)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	<p>V0 network uses the CISCO routers. Ir1 uses the existing V0 network and therefore the CISCO routers is used by Ir1.</p> <p>CISCO router supports both TCP and UDP at the transport layer. Using extended access lists allow finer granularity of control. They allow you to specify both source and destination addresses and some protocol and port number specification. An example from one of the V0 Network router configuration file is used to explain:</p> <p>** allow FTP from Alpha segment **</p> <p>access-list 100 permit tcp 192.150.28.0 0.0.0.255 155.157.0.0 0.0.255.255 eq 21</p> <p>The keyword permit/deny determine whether the router allows/disallows a connection when a packet matches an access condition. All conditions must be met to make a match. In the above example, 192.150.28.0 is the souce network, 0.0.0.255 is the source-mask, 155.157.0.0 is the destination and the 0.0.255.255 is the destination-mask. 21 is the decimal destination port for the specified protocol.</p> <p>Note: The list number in the range 100 to 199 distinguishes an extended access list from a standard access list.</p> <p>For the detail CISCO's implementation of the IP protocol for its line of routing products, refer to " CISCO Router Products Configuration and Reference " volume II, chapter 13, section " Configuring access and Security ".</p>		<p>This test is intended to show the CISCO router which is used in V0 network has the capability to filter packets based on the port/socket of the transport layer protocol .</p> <p>No actual test steps can be run because of the ownership.</p>

5.2.26 Multi Accts Trans. Large Data File to GSFC DAAC Test Procedures (B01.07.01)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Enter <login id of account A> on a GSFC workstation	'Enter Password:' will be displayed	
2	Enter <password> on the account A	'host name{user name}' will be displayed	
3	Repeat steps 1 and 2 for account B on a different GSFC workstation than in step 1.		
4	Check that the .netrc file is properly set up.	The .netrc file will have the necessary lines.	The .netrc file MUST have the following lines: [Line #1]: machine edhs1.gsfc.nasa.gov login anonymous password [your email address] [Line #2]: machine [EDF machine to transfer to] login [your login id] password [your password]
5	Enter: ftpAscii on account A workstation	The script will transfer an ASCII file from EDHS. The script will then prompt for the machine to transmit to.	
6	Enter: A machine to transfer to (ex. nickalus.hitc.com)	The script will pause with a message.	
7	Enter: ftpBinary on account B workstation	The script will transfer a binary file from EDHS. The script will then prompt for the machine to transmit to.	
8	Enter: A machine to transfer to (ex. nickalus.hitc.com)	The script will pause with a message.	
9	Hit " Return " on both workstations	A simultaneous transfer of a ASCII and binary file will take place. After the files have been sent they re-sent back and compared against the original files. A message of "SUCCESSFUL COMPARISON!!" should be displayed.	The ASCII transfer will pause for 15 seconds so that the binary transfer will start(since its much larger) and then transfer so that it is definitely simultaneous
10	complete test log and enter: exit on both workstations.	test completion and logoff	

5.2.27 Mult. Accts. Trans Large Data Files within the EDF Test Procedures (B01.07.02)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Enter <login id of account A> on a EDF workstation	'Enter Password:' will be displayed	
2	Enter <password> on the account A	'host name{user name}' will be displayed	
3	Repeat steps 1 and 2 for account B on a different EDF workstation than in step 1.		
4	Check that the .netrc file is properly set up.	The .netrc file will have the necessary lines.	The .netrc file MUST have the following lines: [Line #1]: machine edhs1.gsfc.nasa.gov login anonymous password [your email address] [Line #2]: machine [EDF machine to transfer to] login [your login id] password [your password]
5	Enter: ftpAscii on account A workstation	The script will transfer an ASCII file from EDHS. The script will then prompt for the machine to transmit to.	
6	Enter: A machine to transfer to (ex. nickalus.hitc.com)	The script will pause with a message.	
7	Enter: ftpBinary on account B workstation	The script will transfer a binary file from EDHS. The script will then prompt for the machine to transmit to.	
8	Enter: A machine to transfer to (ex. nickalus.hitc.com)	The script will pause with a message.	
9	Hit " Return " on both workstations	A simultaneous transfer of a ASCII and binary file will take place. After the files have been sent they re-sent back and compared against the original files. A message of "SUCCESSFUL COMPARISON!!!" should be displayed.	The ASCII transfer will pause for 15 seconds so that the binary transfer will start(since its much larger) and then transfer so that it is definitely simultaneous
10	complete test log and enter: exit on both workstations.	test completion and logoff	

5.2.28 Fault Notification sent via NSI Test Procedures (T01-02.05.07)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Enter: <login id> on the EDF MSS server workstation.	'Password' will be displayed	Assumption: Going from the EDF to any DAAC or from one DAAC to any other DAAC utilizes the NSI.
2	Enter: <password>	'host name {user name}:' will be displayed	
3	Enter: ovw &	HPOpenView will start and the Ir1 map will be displayed	
4	Double-click on the GSFC icon	the GSFC map will be displayed	
5	Select a device in the GSFC map and have a GSFC DAAC liaison disconnect that device from the network.		
6	Select ' Diagnose ' from the menu bar, followed by ' Network Connectivity ', followed by ' Demand Poll '.	A 'Demand Poll' window is displayed with a list of the poll results. The device symbol in the GSFC map has turned red and the GSFC symbol in the Ir1 map has turned blue.	
7	Click on the ' Close ' button.		
8	Have the GSFC DAAC liaison connect that device back to the network.		
9	Select ' Diagnose ' from the menu bar, followed by ' Network Connectivity ', followed by ' Demand Poll '.	A 'Demand Poll' window is displayed with a list of the poll results. The device symbol in the GSFC map and the GSFC symbol in the Ir1 map have both turned back to green.	
10	Click on the ' Close ' button.		
11	Check the event log to see that both events were recorded in the log properly.	The event log will show that both events were recorded properly.	
12	Exit OpenView, complete test log, end test.		

5.3 System Management (T3)

5.3.1 X/Open Functions Test Procedures (TC004.001)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Login to an Ir1 DCE Host in the EDF as standard user		
2	Use the cdscp command to start the CDS control program		
3	Use the ' list directory .//* ' command to verify if directory ' Ir1_it ' exists.		entries = files, sub-directories
4	If directory doesn't exists use the ' create directory ./:Ir1_it ' command to create the directory.		
5	Use the ' create directory ' command again to create ' test1 ' as a subdirectory of ' Ir1_it '.		
6	Repeat step 5 to create directories ' test2 ' and ' test3 '.		
7	Use the ' show directory ./: Ir1_it ' command to demonstrate that the directory service associates the proper naming service to use for those entries.		
8	Use the ' show directory ./:/* ' command to list the available entries.		print screen output to file
9	Repeat steps 7 & 8 with ' list ' instead of the ' show command '.		
10	Use the command ' delete directory ./:Ir1_it/test3 ' to delete the directories created.		
11	Use the ' list command ./: ' to verify directory was deleted. s		
14	Complete test log / end test		

Notes: This test is DCE oriented (not UNIX based)

5.3.2 Replication Test Procedures (TC004.002)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Logon to an Ir1 DCE server in the EDF as a standard user		
2	Use the cdscp command to start the CDS control program		
3	Use the ' create clearinghouse ' command to make an existing clearinghouse available. (master)		
4	Logon to another Ir1 DCE server in the EDF as a standard user		
5	From the second server create a Read-Only copy of the clearinghouse created in step 2 by using the ' set cdscp preferred clearinghouse ' command.		
6	Attempt to write to a file in the replica created in step 5	CDS should prohibit this action	
7	Ensure that the propagation attribute is set to "Low"		Low = no immediate skulk
8	Modify a file in the master clearinghouse	these changes should not be applied to the Read-Only replica	
9	Manually propagate the file changes in step 8	these changes should now be applied to the Read-Only replica	
10	Ensure that the propagation attribute is now set to "High"		High = immediate skulk
11	Modify another file in the master clearinghouse	these changes should now be automatically applied to the Read-Only replica	
12	complete test log / end test		

Notes: This test is DCE oriented (not UNIX based)

5.3.3 Distribution Test Procedures (TC004.003)

Step No.	Step Description / Operator Action	Expected Results	Observations / Comments
1	Login to css1hped DCE Cell admin. (with root access)	Successful login	
2	Using cdscp create clearinghouse admin command, partition a namespace in the EDF DAAC among three different hosts, enter: cdscp	cdscp mode is initiated	
3	Using cdscp create replica admin command, replicate partitions of this namespace across three different hosts, enter: > create replica ././lr1/test_test	Replica ././lr1/test_test is created	must specify a target clearinghouse on the command line
4	Using the Global Data Service (GDS), attempt to access namespace information between two hosts		
5	Using the cdscp cds_convergence attribute demonstrate that the namespace can be updated automatically		set propagation attribute to "High"
6	Enter: > exit	This will exit from the cdscp mode.	
7	Use the acl_edit command to demonstrate that the Directory Service interacts with the Security Service to provide host based security for the entries in the namespace, enter: acl_edit	The acl_edit will have all of the user groups and priviledges defined.	
8	Enter: exit	This will end the acl_edit mode.	
9	complete test log / end test		

5.3.4 Single Host Time Synchronization Test Procedures (TC005.001)

Step No.	Step Description / Operator Action	Expected Results	Observations / Comments
1	Login to an Ir1 DCE server: > dce_login (dce login name)	Successful login	
2	Login to another DCE server on the same network: > dce_login (dce login name)	Successful login	
3	Enter: dtscp (From both dce logins)	The dtscp command mode will be initialized	
4	From the dtscp command prompt, enter: > set servers required 3 <return>	The servers required is set to 3	For this test, three (3) Distributed Time Service servers located on the same cell are needed.
5	From the dtscp prompt, enter: >exit Then enter: :rpccp	This will exit out of the dtscp mode and put the user in the rpccp mode.	
6	From the rpccp prompt, enter: >show profile ./:/lan-profile	The profile elements will be displayed for the DTS servers	
7	Enter: >exit Then enter: :dtscp	This will exit out of the rpccp mode and then put the user back into the dtscp mode	
8	From the dtscp command prompt, enter: > help	The HELP directive invokes the DTS HELP service to display information about a DTS service	
9	From the dtscp command prompt, enter: > help disable	The following information will appear: The DISABLE directive causes the time service to stop synchronize. dtscp> disable (It doesn't have to be in upper case)	
10	From the dtscp command prompt, enter: > disable		

11	Set DTS tuning characteristics using the following commands in steps 11 - 19: From the dtscp command prompt, enter: > set maximum inaccuracy 100	Maximum Inaccuracy is set to 100 ms	The results will not be seen until the query in step #18
12	From the dtscp command prompt, enter: > set synchronization hold down 0-00:02:00.000	Server Sync Hold Down is set 2 mins	The results will not be seen until the query in step #18
13	Login to DCE client: > dce_login (dce login name)		
14	From the DCE client enter: : dtscp	DCE mode will be initialized on the client	
15	From the DCE client enter: > set synchronization hold down 0-00:10:00.000 <return>	Client Sync Hold Down is set to 10 mins	The results will not be seen until the query in step #18
16	From the dtscp command prompt, enter: > set error tolerance 0-00:10:00.000 <return>	Error Tolerance is set to 10 mins	The results will not be seen until the query in step #18
17	From the dtscp command prompt, enter: > set local set timeout 0-00:00:02.000 <return>	Local set Timeout is set to 2 secs	The results will not be seen until the query in step #18
18	From the dtscp command prompt, enter: > set global set timeout 0-00:00:15.000 <return>	Global Set Timeout is set to 15 secs	The results will not be seen until the query in step #18
19	From the dtscp command prompt, enter: > set query attempts 3 <return>	Query Attempts is set to 3	The results will not be seen until the query in step #18
20	Open another xterm window and login to the same server.	Successful login	
21	Execute a query to get the UTC time as well as the DCE time from the single host in step 1. Enter from the command line: /usr/bin/remsh trevino.hitc.com	1.) The results will scroll on the screen. If the user wishes, the results could be written to a file: /usr/bin/remsh trevino.hitc.com/bin/date >>~/(filename)	Note: baltic is the name of server. Must repeat command for each server. This command in the Expected Results can "hang" your xterm window. Recommend just printing output to screen.

22	Verify that the DCE time is within the maximum inaccuracy set parameter to the UTC time.		
23	From the dtscp command prompt, enter: > enable	The ENABLE directive causes a disable DTS process to begin synchronizing. PLEASE DO NOT FORGET TO ENABLE!!!!!!	
24	From the dtscp command prompt, enter: > exit		
25	From the command line, enter: :kdestroy	This command cleans up the current DCE session that is logged on	
26	End of Test		

5.3.5 Multiple Host Time Synchronization Test Procedures (TC005.002)

Step No.	Step Description / Operator Action	Expected Results	Observations / Comments
1	Login to an Ir1 DCE server: > dce_login (dce login name)	Successful login	
2	Login to another DCE server or replica server on the same network: > dce_login (dce login name)	Successful login	
3	Enter: dtscp (From both dce logins)	The dtscp command mode will be initialized	
4	From the dtscp command prompt, enter: > set servers required 3 <return>	The servers required is set to 3	For this test, three (3) Distributed Time Service servers located on the same cell are needed.
5	From the dtscp prompt, enter: >exit Then enter: :rpccp	This will exit out of the dtscp mode and put the user in the rpccp mode.	
6	From the rpccp prompt, enter: >show profile ./:/lan-profile	The profile elements will be displayed for the DTS servers	
7	Enter: >exit Then enter: :dtscp	This will exit out of the rpccp mode and then put the user back into the dtscp mode	
8	From the dtscp command prompt, enter: > help	The HELP directive invokes the DTS HELP service to display information about a DTS service	
9	From the dtscp command prompt, enter: > help disable	The following information will appear: The DISABLE directive causes the time service to stop synchronize. dtscp> disable (It doesn't have to be in upper case)	
10	From the dtscp command prompt, enter: > disable		

11	Set DTS tuning characteristics using the following commands in steps 11 - 19: From the dtscp command prompt, enter: > set maximum inaccuracy 100	Maximum Inaccuracy is set to 100 ms	The results will not be seen until the query in step #18
12	From the dtscp command prompt, enter: > set synchronization hold down 0-00:02:00.000	Server Sync Hold Down is set 2 mins	The results will not be seen until the query in step #18
13	Login to DCE client: > dce_login (dce login name)		
14	From the DCE client enter: : dtscp	DCE mode will be initialized on the client	
15	From the DCE client enter: > set synchronization hold down 0-00:10:00.000	Client Sync Hold Down is set to 10 mins	The results will not be seen until the query in step #18
16	From the dtscp command prompt, enter: > set error tolerance 0-00:10:00.000	Error Tolerance is set to 10 mins	The results will not be seen until the query in step #18
17	From the dtscp command prompt, enter: > set local set timeout 0-00:00:02.000	Local set Timeout is set to 2 secs	The results will not be seen until the query in step #18
18	From the dtscp command prompt, enter: > set global set timeout 0-00:00:15.000	Global Set Timeout is set to 15 secs	The results will not be seen until the query in step #18
19	From the dtscp command prompt, enter: > set query attempts 3	Query Attempts is set to 3	The results will not be seen until the query in step #18
20	Open another xterm window and login to the same server.		
21	Execute a query to get the UTC time as well as the DCE time from the host in step 1. Enter from the command line: 1.) / usr/ bin/ remsh baltic.hitc.com <return> 2.) / usr/ bin/ remsh csms2.hitc.com <return> 3.) / usr/ bin/ remsh trevino.hitc.com <return>	The results will scroll on the screen. If the user wishes, the results could be written to a file : /usr/bin/remsh baltic.hitc.com/bin/date >>~/(filename)	Note: baltic is the name of server. Must repeat command for each server. This command in the Expected Results can "hang" your xterm window. Recommend just printing output to screen.
22	Verify that the DCE time is within the maximum inaccuracy set parameter to the UTC time.		
23	From the dtscp command prompt, enter: > enable	The ENABLE directive causes a disable DTS process to begin synchronizing. PLEASE DO NOT FORGET TO ENABLE!!!!!!	

24	From the dtscp command prompt, enter: > exit		
25	From the command line, enter: :kdestroy	This command cleans up the current DCE session that is logged on	
26	End of Test		

5.3.6 Multiple Host Time Synchronization Test Procedures (TC005.002):

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Login to an Ir1 DCE Host in the EDF as a privilege user <DCE_login>		
2	Using the command dtscp show local servers to verify that they are at least three (3) DTS servers on the same cell as the DCE Host in step 1.		Need 3 DTs servers located on same cell in order to run the test. Use dtscp set servers required 3 to set the number of servers required before synchronization.
3	Set DTS tuning characteristics using the following commands: maximum Inaccuracy 100 ms ---> dtscp set maximum inaccuracy 100 server Sync Hold Down 2 mins ---> dtscp set synchronization hold down 0-00:02:00.000 Client Sync Hold Down 10 mins --> dtscp set synchronization hold down 0-00:10:00.000 Error Tolerance 10 mins --> dtscp set error tolerance 0-00:10:00.000 Local set Timeout 2 secs --> dtscp set local set timeout 0-00:00:02.000 Global Set Timeout 15 secs ---> dtscp set global set timeout 0-00:00:15.000 Query Attempts 3 ---> dtscp set query attempts 3		Need 3 DTs servers located on same cell in order to run the test.
4	Execute a cron job to get the UTC time as well as the DCE time from the single host in step 1.(eg. /usr/bin/remsh baltic/bin/date >>~/baltictime)		Note: baltic is the name of server. Must repeat command for each server
5	Verify that the DCE time from all hosts is within the maximum inaccuracy set parameter to the UTC time.		
6	End of test		

5.3.7 Inaccuracy Injection Test Procedures (TC005.003)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Login to css1hped as yourself		
2	Enter: dce_login it_admin <return>	Password:	
3	Enter: <password>	System Administrator password is required	
4	Enter: dtscp <return>	'dtscp' mode is initiated	
5	At the dtscp prompt, enter: >help show	A list of all possible show commands will appear	
6	At the dtscp prompt, enter: >set maximum inaccuracy 100	The maximum inaccuracy is set to 100	
7	At the dtscp prompt, enter: >show maximum inaccuracy	Verifies/displays that the maximum inaccuracy is set at +0-00:01:40.000l	
8	At the dtscp prompt, enter: >set error tolerance 0-00:10:00.00	The error tolerance is set to 10 mins: +0-00:10:00.000l	
9	At the dtscp prompt, enter: >show error tolerance 0-00:10:00.00	Verifies/displays that the error tolerance is set to 10 mins.	
10	At the dtscp prompt, enter: >set local set timeout 0-00:00:02.000	Sets the local global set timeout is set to 2 mins: +0-00:00:02.000l	
11	At the dtscp prompt, enter: >set query attempts 3	The query attempts is set to 3.	
12	At the dtscp prompt, enter: >show query attempts	Verifies/displays that the query attempts are set to 3: 3	
13	Enter: exit	Exits from dtscp mode	
14	Login to mss1hped as your self	successful login	
15	Enter: dce_login it_admin	Password:	
16	Password: <password>	System Administrator password	
17	Login to mss2sunedf as your self	successful login	
18	Enter: dce_login it_admin	Password:	
19	Password: <password>		

20	Verify that the correct time within set tolerances is propagated to all hosts with intervals of 15 seconds.		
21	From css1hped Enter: while (1) ? date ?sleep 15 ?end	The date will print on the screen every 15 seconds.	
22	From mss1hped Enter: while (1) ? date ?sleep 15 ?end	The date will print on the screen every 15 seconds.	This will verify that the changes have propagated to the other two servers.
23	From mss2sunedf Enter: while (1) ? date ?sleep 15 ?end	The date will print on the screen every 15 seconds.	This will verify that the changes have propagated to the other two servers.
24	Ctrl -C on all three servers	The program will stop	
25	Enter exit 2 times on mss2sunedf	Logs off server	
26	Enter exit 2 times on mss1hped	Logs off server	
27	Enter exit 2 times on css1hped	Logs off server	
28	Complete logs		

5.3.8 DTS Management Test Procedures (TC005.004)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Login to an Ir1 DCE Host in the EDF as a privilege user <DCE_login>		
2	<p>Set DTS tuning characteristics using the following commands:</p> <p>maximum Inaccuracy 100 ms ---> dtscp set maximum inaccuracy 100</p> <p>server Sync Hold Down 2 mins ---> dtscp set synchronization hold down 0-00:02:00.000</p> <p>Client Sync Hold Down 10 mins --> dtscp set synchronization hold down 0-00:10:00.000</p> <p>Error Tolerance 10 mins --> dtscp set error tolerance 0-00:10:00.000</p> <p>Local set Timeout 2 secs --> dtscp set local set timeout 0-00:00:02.000</p> <p>Global Set Timeout 15 secs ---> dtscp set global set timeout 0-00:00:15.000</p> <p>Query Attempts 3 ---> dtscp set query attempts 3</p>		Configure at least 3 servers
3	Use the dtscp create type clerk command to create a clerk on the specified node		
4	Place the clerk into operation by invoking the dtscp enable command		
5	Use the dtscp delete command to cause the DTS to exit on the local mode		
6	Use the dtscp disable command to suspend the DTS entity		
7	Restart the DTS daemon(clerk or server process) using the dtstd enable command		
8	Repeat steps 3 & 4		

9	Repeat steps 3 thru 8 using the server instead of the clerk		
10	Display the current time on the node by using the command dtscp show current time		
11	Use the dtscp change epoch 1[time absolute-time] to specify a new clock setting.		
12	Verify the time was changed by repeating the dtscp show current time command.		
13	Invoke the dce_config to demonstrate the installation and configuration of new servers		
14	Use the dfs_config command to configure a server to client.		
15	Use the dfs_config command to configure a server to client..		
16	Terminate a process from one of the severs. Demonstrate that the faulty server could be identified and fixed. Use the dtscp show local servers not in the group command to verify server no longer in the group.		
17	Use the dtscp set courier role backup courier to set the courier role for a server.		
18	Use dtscp show acting courier role command to verify if the backup courier is functioning as a courier		
19	End of test		

5.3.9 DTS Security Test Procedures (TC005.005)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Login to css1hped as yourself	successful login	
2	Enter: dce_login it_admin <return>	Prompts for the priviledge user password	
3	Enter: <password>		
4	Enter: acl_edit	This command allows the System Administrator to view the ACL (Accss Contol List). The mode will appear like this: sec_acl_edit>	
5	At the sec_acl_edit> prompt, enter: l (list)	This will list all of the accounts on your DCE Cell.	
6	Enter: exit	This exits the acl_edit mode	
7	Enter: rgy_edit	This invokes the rgy_edit mode. This edit has the orgs. and groups on your DCE Cell.	
8	At the rgy_edit> prompt, enter: do g	This list the Domain Group.	
9	At the rgy_edit> prompt, enter: v	This list the individual groups on your DCE Cell.	
10	At the rgy_edit> prompt, enter: v IR1 -m	This list the members that are in the IR1 Domain Group.	
11	At the rgy_edit> prompt, enter: v subsys/dce/cds_admin -m	This list the the two members: cell_admin , it_admin	
12	At the rgy_edit> prompt, enter: exit	This exits rgy_edit	
13	Enter: kdestroy	Whenever a user logs into DCE, the user automatically creates entries into DCE called ' credentials ' that need to be cleaned at every DCE session.	
14	Enter: exit	Logs off css1hped .	

5.3.10 DBMS Interface Test Procedures (TC013.003)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Logon to a DAAC MSS server workstation (HP) in the EDF using valid ID and password as an administrator	Successful logon	
2	Initialize Hp Openview by using the commands: <cd /usr/OV/bin> to change to the correct directory <ovw &> to start the Hp OpenView graphical interface.	A map depicting the overall topology is displayed	
3	Double click on the 'EDF' icon.	A map depicting the EDF configuration is accurately displayed.	
4	From the 'Options ' pull down menu, select <Data Collection & threshold:snmp >	A MIB Data Collection window will be displayed.	
5	Select <computer SystemUsers> from the list of metrics in the MIB Data Collection window if it is present. If it is not present perform step 6 otherwise go to step 28.		
6	From the 'MIB Data Collection' window select <ADD> then the 'MIB DATA Collection/MIB Object Selection' window will be displayed. Select the 'Down Tree' following in the order given : <private.enterprises.hp.nm.system.general.computerSystem.Computersystemusers.>. Use the 'Apply' button to add and the 'MIB DATA Collection/MIB Object Selection' window will be displayed.	Computersystem users is added to the MIB DATA Collection window as a metric.	
7	Enter the source <mss1hpedf.gsfc.nasa.gov> then click the 'ADD' button to add this source in the "list of collection Sources".		
8	Change the 'Collection Mode' to <Store, Check Thresholds>		
9	Change the 'Polling Interval' to <5s>		
10	Change the 'Trap Number' to <1001> Note: the trap number must be an odd number in the range 1001 - 1999.		
11	Change the values in the 'Threshold' and 'Rearm' boxes to two greater than the number of users currently on the system. Note: use 5 as threshold and 4 as Rearm value		
12	Change the 'Instances' to <All>		

13	Click on the <Configure Threshold Event> button.	The 'Event Configuration ' window appears.	
14	Click on ' ADD ' button .	The 'ADD Event' window appears.	
15	Enter the Event Name and Trap Number in the box. Note: Toomaryusers and 1001 is currently used		
16	Enter the following in the ' Source ' box and click the ' ADD ' button - ' mss1hpedf.gsfc.nasa.gov '		
17	Change the ' Event Category ' to ' Threshold Events '		
18	Enter the following line in the ' Popup Notification box ' - Number of users exceeded 5		
19	Enter the following line in the ' Command for Automatic Action ' box: echo " Too many users on \$2" /usr/bin/mailx -s "too many users" <userid>@<mail ip address>		
20	Click on ' OK ' in the Add Event box. Also click on ' Apply ' in the Event Configuration window		
21	Selet the trap (trap 1001) which we just added and click on ' Modify ' button .	The 'Modify Event' window appears.	
22	Enter the Event Name and Trap Number in the box. Note: Lessusers and 1002 is currently used		
23	Enter the following in the ' Source ' box and click the ' ADD ' button - ' mss1hpedf.gsfc.nasa.gov '		
24	Change the ' Event Category ' to ' Threshold Events '		
25	Enter the following line in the ' Popup Notification box ' - Number of users less or equal to 4		
26	Enter the following line in the ' Command for Automatic Action ' box: echo " Less users on \$2" /usr/bin/mailx -s "less users" <userid>@<mail ip address>		
27	Click on ' OK ' in the Add Event box. Also click on ' Apply ' in the Event Configuration window and click on ' OK ' in the MIB DATA Collection/Add Collection for Computer System Users window		
28	In the MIB Data Collection window the trap we just created will be add in the MIB Object Collection Summary block. Select that and click the Apply button		

29	In the window that you started Openview from , start up enough logins to exceed the number of users.	An event notify box/ trap shall appear in the upper left corner and stating the numbers of users exceeded 5	
30	In the same window exit twice to test the Rearm condition	An new event notify box/ trap shall appear in the upper left corner and stating the numbers of users is less or equal to 4	
31	Click on ' Threshold Events ' in the Event Categories window after review the event, close the Threshold Event Browser window.	A Threshold Event Browser window popup displaying severity , date/time when event was generated, source and the message 'Computer System Users'	
32	Enter: Mailx on one of the workstation	Mail utility will start up	
33	Enter: n (until desired messages is read)	There should be a new message that states: Too many users on mss1hpedf	
34	Double click on ' Show Data ' in the MIB DATA Collection window	MiB Data Collection / Show Data window is displayed.	
35	CLick on ' graph ' in the MIB Data collection/Show data window	Openview Grapher window is displayed..	
36	In the Openview Grapher window click on ' View ' and select statistics	Openview Grapher window is displayed showing minimum, average, maximum and last value	
37	Click on ' Suspend, Apply, Suspend ' in the MIB Data Collection Window.	Verify by looking at the MIB Data Collection /show data that data is suspended for ComputerSystemusers.	
38	Click on 'the following in the MIB Data Collection' window ' Resume, Apply, Resume '.	Verify that the collection of data resumes.	
39	Close all Windows and exit Openview. End of Test		
	Note:CPU, Memory and disk utilization were recorded during TC013.005 Test . Also was unable to test bar & pie charts, rates, standard deviations and protocol errors. These were not part of Ir-1		

5.3.11 Management Data Access Test Procedures (TC013.004)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Logon to a DAAC MSS Server workstation (HP) in the EDF as an administrator		
2	Initialize Hp Openview by using the command : <cd /usr/OV/bin> to change to the directory <ovw & > to start the Hp OpenView graphical interface.	A map is displayed showing the various DAACS.	
3	Double click on the Icon for the EDF DAAC	A submap for EDF is displayed	
4	Logon to mss2sunedf.gsfc.nasa.gov as a user		
5	Go to the directory /usr/mssdata/MSS/bin and enter: <testd & > to start the software application process.		
6	Double click on the mss2sunedf ICON .	A submap shall appear and the object for testd is also appear in the submap with Green color	
7	Wait one minute and then kill < Kill -9 'PID #'>the software application process.	After a period of approx. 10 minutes the mss2sunedf Icon in the submap turns to blue	
8	Verify that the testd ICON turns to red..	Testd ICON is red	
9	Click on the ECS Application Events from the Event Categories window and verify that the testd application error is log in the database	ECS Application Events Browser window is displayed	
10	Restart the testd application process by entering <testd &> and verify the ICON turns back to green.	Testd ICON turns green	
10	Click on ECS Application Events under the Event Categories window and verify that the testd application up is log in the database..		
11	Close all windows and exit Openview. End of test		

5.3.12 Performance Monitoring Threshold Test Procedures (TC013.005)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Login to a DAAC MSS Server workstation (HP) in the EDF as an administrator.		
2	Initialize the HP OpenView application : Type: cd /usr/OV/bin Type: ovw &	Verify overall map depiction of the network topology is accurately displayed.	
3	Double click on the "EDF" icon.	Verify map depicting the EDF configuration is accurately displayed.	
4	From the "Options" pull down menu, select "Data Collection & Thresholds: SNMP..."	A MIB Data Collection window will be displayed	
5	From the "MIB Data Collection" window, select a performance metric, such as "Disk%Util"	From the MIB Object Collection Summary box within the MIB Data Collection window verify that the PMAS provides a configurable number of thresholds for each performance metric	
6	From the MIB Object Collection Summary box within the MIB Data Collection window select the MIB Object	Collection Data box is highlighted	
7	Enter threshold and Rearm values in the collection Details box and click on Replace button Note: In order to find out what will be the proper values for threshold and rearm, you can click on the "show data" button from the MIB Data Collection window and base on the current value in the value column to determine what will be the proper value for your test.	The new values will appear in the MIB Object Collection Summary box	This shows that the EMC PMAS can create and send a list of suggested initial thresholds for each performance metric to the MSS site performance management application via CSS services and that the sites can receive it.
8	Reselect the MIB Object from the "MIB Object Collection Details" box.		
9	Configure the threshold event by clicking on the "Configure Threshold Event..." button.	Event Configuration Window will popup.	
10	Select the "Event Name" which has the same event number as the trap number defined in the "Collection Details" box for the threshold event.		

11	Click on the “Modify...” button.	The Modify Event window will popup	
12	Configure the “Popup Notification (Optional)” field to display a message to the console when the threshold event is exceeded.		
13	Click on the “Ok” button.	The Modify Event window is disappeared	
14	Select the “Event Name” which has the event number as the (trap number + 1) in the “Collection Details” box for the rearm event.		
15	Configure the “Popup Notification (Optional)” field to display a message to the console when the rearm event is met.		
16	Click on the “Ok” button.	The Modify Event window is disappeared	
17	Click on the “Apply” or “Ok” button from the Event Configuration window to replace the old information with the updated information.		
18	Exceed the limit specified in step 7 by storing as many large postscript and HDF files to the system storage device as possible without damaging any existing files on the system.	Verify that when the threshold is exceeded, the popup window shall display at the upper left corner	
19	Remove the files which got in step18 to bring the hard disk storage capacity below the rearm level.	Verify that when the rearm value is met, the popup window is displayed,	
20	Repeat steps 5 through 19 for other configured events such as ping_css1hpdf.	Verify that when threshold values are not exceeded for the above steps that they are no alarms or warnings.	
21	Close all windows and exit Openview. End of Test		

5.3.13 Basic Monitoring Test Procedures (TC014.001)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Login to "trevino.hitc.com" as a valid user. Type: rlogin trevino.hitc.com -l <username> Type: <password>		
2	Set the display. Type: setenv DISPLAY <hostname>: 0.0		
3	Initialize the HP OpenView application. Type: ovw &	Verify that a map depiction of the network topology is accurately displayed.	
4	Double click on the available icons to verify that lower level submaps exist.	Verify that the lower level topologies include hosts, routers, network interface cards, bridges, gateways, operating systems, peripherals, databases and their status.	
5	Determine the operational state of all network components, hosts and peripherals.		
6	Force an operational state change by terminating or disconnecting a host on the network.	Verify that the symbol representing the disconnected host turns from green to red.	
7	Demonstrate the ability of the PMAS to receive notification of the change by clicking on the yellow sub node. Double click on the yellow icons, going down each layer until the problem process is pinpointed by the red icon.	Verify that the condition is propagated to each higher level map by a change of color to another state.	
8	Reconnect the host from step 6.	Verify that the icons change back to green indicating everything is fine.	
9	Repeat steps 6 through 7 for the other network components (such as operating systems, peripherals, gateway and databases).		
10	Demonstrate the ability to generate reports on an interactive and scheduled basis to the console, to a file, and to a printer.		
11	End of Test		

5.3.14 Open View Test Procedures (TC014.002)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Login to a DAAC MSS Server workstation (HP) in the EDF as an administrator.		
2	Initialize the HP OpenView application : Type: cd /usr/OV/bin Type: ovw &	HP OpenView will initialize	Note the ' Event Categories ' window and the many different faults that are defined.
3	Double click on the EDF icon to bring up the EDF window.	Verify map depicting the EDF configuration is accurately displayed.	Move the windows around so that the entire Ir1 and EDF maps are visible.
5	Select ' Options ' from the menu bar, followed by ' Topology/Status Polling : IP... '.	The 'Topology/Status Polling' window appears.	
6	Configure the polling interval : click the ' Polling Master Switch ', ' Status Polling Switch ', and ' Configuration Checking Switch ' buttons and putting ' 1s ' in the ' Configuration Polling Interval ' box.	The polling interval is set to one second.	
7	Select ' Diagnose ' from the menu bar, followed by ' Network Connectivity ', followed by ' Ping... '.	A 'Ping' window is displayed.	
8	Enter the new IP address in the ' To Name or IP Address ' box.	Data is displayed similar to the following: <64 bytes from 192.150.28.112:icmp_seq= 247, time =6 ms.	
9	Click on the ' Stop ' button.		
10	Click on the ' Close ' button.		
11	Disconnect a hardware device(e.g. computer, printer) from the network.	The symbol of the device that was disconnected will turn red and the EDF icon in the Ir1 map will turn yellow.	
12	Double click on the red device symbol.	Node submap opens with one of the interfaces Red.	The fault have been isolated to a single node.
13	Connect the hardware device back to the network.	The maps will return to their original state.	
14	Click on the ' All Events ' box in the 'Event Categories' window.	The 'All Events Brower' window appears.	

15	Examine the event log to determine whether all appropriate events have been documented.		
16	Select ' File ' from the menu bar, followed by ' Close '.		
17	Double click on the GSFC DAAC icon	The GSFC submap appears.	
18	Click on one of the symbols(devices) in this submap.	symbol becomes highlighted	
19	Select ' Misc ' from the menu bar, followed by ' Terminal Connect ', followed by ' Telnet (hpterm) '.	A 'hpterm' window requesting the user to login is displayed on the terminal.	
20	Select ' Diagnose ' from the menu bar, followed by ' Network Connectivity ', followed by ' IP/TCP/SNMP... '.	The 'Test All protocols' window is displayed with the following information: ICMP Echo < 10 ms; TCP connect = ok and SNMP Get = ok.	
21	Click on the ' Close ' button.		
22	Select ' Diagnose ' from the menu bar, followed by ' Network Connectivity ', followed by ' Demand Poll '.	A 'Demand Poll' window is displayed with a list of the poll results.	
23	Click on the ' Close ' button.		
24	Select ' Diagnose ' from the menu bar, followed by ' Network Connectivity ', followed by ' Ping... '.	A 'Ping' window is displayed with data similar to the following: <64 bytes from 128.183.118.44:icmp_seq= 247, time =6 ms.	
25	Click on the ' Stop ' button.		
26	Click on the ' Close ' button.		
27	Select ' Monitor ' from the menu bar, followed by ' Network Configuration ', followed by ' Services... '.	A 'Sevices' window is displayed with a listing of all of the available services..	
28	Click on the ' Close ' button.		
29	Select ' ECS ' from the menu bar, followed by ' Display Current Reports '.	A list of possible reports are displayed	
30	Select a report, such as ' Traffic Reports '	The 'OpenView Grapher' window is displayed	
31	Select ' File ' from the menu bar, followed by ' Print... '.	The 'Print OpenView Grapher' window is displayed.	
32	Click on the ' Apply ' button.	The graph prints out.	
33	Click on the ' Cancel ' button.		
34	Select ' File ' from the menu bar, followed by ' Save As... '.	The 'Save Data' window is displayed.	
35	Click on the ' Apply ' button.	The graph is saved to disk.	

36	Click on the 'Cancel' button.		
37	Select 'File' from the menu bar, followed by 'Exit' to close the 'Grapher Window'.		
38	Repeat the previous step until you close all the reports		
39	Select 'Options' from the menu bar, followed by 'Data Collection & Thresholds: SNMP' .	The 'MIB Data Collection' window appears.	
40	Select 'computerSystemUsers' from the 'MIB Objects Configured for Collection' window.		
41	Select 'mss1hpedef.gsfc.nasa.gov' from the 'MIB Object Collection Summary' window.		
42	Change the values in the 'Threshold' and 'Rearm' boxes to two greater than the number of users currently on the system.		
43	Click on the 'Configure Threshold Event...' button.	The 'Event Configuration' window appears.	
44	Click on 'Toomanyusers' event and click on the 'Modify' button.	The 'Modify Event' window appears.	
45	Enter the following line in the 'Command for Automatic Action' box: 'echo "Too many users on \$2" /usr/bin/mailx -s "Many users" <userid>@<mail ip address>' , if it is not there yet		
46	Enter the following line in the 'Popup Notification' box: 'Number of Users Exceeded x' , if it is not there yet		
47	Click on the 'OK' buttons.		
48	In the window that you started OpenView from, start up two more login sessions.	A notify box should appear stating 'Number of Users Exceeded x'.	
49	Enter: mailx on one of the workstation command line	Mail utility will start up.	
50	Enter: n (until all messages are read)	There should be a new message that states: 'Too many users '.	
51	Click on the printer icon and make sure the printer is 'online' .		
52	Select 'Monitor' from the menu bar, followed by 'MIB Values' , followed by 'Browse MIB: SNMP...' .	The 'Browse MIB' window is displayed.	
53	Select 'private' then click the 'Down Tree'		
54	Select 'enterprises' then click the 'Down Tree'		

55	Select ' hp ' then click the ' Down Tree '		
56	Select ' nm ' then click the ' Down Tree '		
57	Select ' System ' then click the ' Down Tree '		
58	Select ' net-peripheral ' then click the ' Down Tree '		
59	Select ' net-printer '. then click the ' Down Tree '		
60	Select ' generalDeviceStatus '.then click the ' Down Tree '		
61	Select ' gdStatusDisplay '		
62	Click on the ' Start Query ' button	'online' is displayed in the 'MIB Values' window.	
63	Take the printer ' offline '.		
64	Click on the ' Start Query ' button	'offline' is displayed in the 'MIB Values' window.	
65	Put the printer in ' test mode '.		
66	Click on the ' Start Query ' button	'test mode' is displayed in the 'MIB Values' window.	
67	Click on the ' Close ' button		
68	Exit from OpenView and end test		

5.3.15 Fault Indication Test Procedures (TC014.003)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Enter <login id> on the EDF workstation 'trevino'	'Enter password:' will be displayed	
2	Enter <password>	'host name (user name)' will be displayed	
3	Enter ovw &		
4	Double click on the EDF icon to bring up the EDF window		
5	Select the trevino icon from the EDF map		
6	Select ' Monitor ' from the menu bar, followed by ' NETWORK Activity ', follow by ' TCP Connections... '	The TCP Connection Table will be displayed	
7	Verify that there are no ftp or telnet sessions with chichi or irwin.		
8	Select ' File ' from the menu bar, follow by ' Save As... '	A Save box will open	
9	Enter the file to save the contents to and click on the Apply button.	The contents will be saved	
10	Click on the Cancel button	Save box disappears	
11	In a Xterm window, enter: ftp chichi	A ftp session will start	
12	In a xterm window, enter: telnet chichi and then login	A telnet session will start	
13	In a xterm window, enter ftp irwin	A ftp session will start	
14	In a xterm window, enter telnet irwin and then login	A telnet session will start	
15	Click on the Restart button in the TCP Connection Table window	The window will refresh	
16	Verify that there is a ftp and telnet session with both chichi and irwin	HP Openview has recognized the application.	
17	Select ' File ' from the menu bar, follow by ' Save As... '	A save box will open	
18	Enter the file to save the contents to and click on the Apply button	The contents will be saved	
19	Click on the Cancel button	save box disappears.	
20	In the xterm window with the ftp to chichi, enter: quit	ftp session will terminate	
21	In the xterm window with the telnet to irwin, enter: exit	telnet session will terminate	
22	Click on the Restart button in the TCP Connection Table window.	The window will refresh	
23	Verify that the ftp session with chichi and the telnet session with irwin have been removed.	HP OpenView has depicted the changes.	
24	Select 'File' from the menu bar, followed by ' Save As... '	A Save box will open	
25	Enter the file to save the contents to and click on the Apply button	The contents will be saved	

26	Click on the Cancel button	Save box disappears	
27	Click on Close button in the TCP Conections Table window		
29	Exit Openview and remaining xterms, then logoff to end Test		

5.3.16 MUI Services Test Procedures (TC014.004)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Enter <login id> on the EDF MSS server workstation.	'Enter Password:' will be displayed	
2	Enter <password>	'host name{user name}' will be displayed	
3	Enter: ovw &	HP OpenView will initialize	
4	Double click on the EDF icon to bring up the EDF window.		Move the windows around so that the entire Ir1 and EDF maps are visible.
5	Click on one of the symbols(devices) in the EDF window.	symbol becomes highlighted	
6	Select ' Monitor ' the menu bar, followed by ' Device Configuration ', followed by ' System Information... '.		Demonstrate mouse usage
7	Click on ' Close '		
8	Enter: <ALT>-D	Diagnose Menu appears.	Demonstrate keyboard usage
9	Enter: C	Network Connectivity Menu appears.	
10	Enter: D	The 'Demand Poll' window appears.	
11	Enter: <SHIFT>-TAB	'Close' button is highlighted.	
12	Enter: <Return>	The 'Demand Poll' window closes.	
13	Select ' Edit ' from the menu bar, followed by ' Add Object '.	The 'Add Object: Palette' window appears	
14	Click on the ' Computer ' icon found in the Symbol Classes.		
15	Click (with the middle mouse button) on and drag the ' Workstation ' icon found in the Symbol Subclasses into the EDF map area.	The 'Add Object' window appears	
16	Click in the ' Label: ' text box and enter an icon name (use your loginid).		
17	Click on the ' OK ' button in the 'Add Object' window.		
18	Click on the ' OK ' button in the 'Add Object: Palette' window.	A new icon has been added to the EDF map	
19	Click on and hold the right mouse button on the symbol and select ' Describe/Modify Symbol... ' from the pulldown menu.	The 'Symbol Description' window appears	
20	Click in the ' Label: ' box and type in the new name, then click on the ' OK ' button.	The symbol has the new name in the EDF map	

21	Click on and hold the middle mouse button on the symbol and drag the it to a new location (preferably in between two existing symbols).	The symbol changes position.	
22	Click on and hold the right mouse button on the symbol and select ' Change Symbol Type... ' from the pulldown menu.	The 'Change Symbol Type' window appears.	
23	Select ' Main Frame ' from the Symbol Subclasses and then click on ' OK '.	The symbol has changed to the new shape.	
24	Click on and hold the right mouse button on the symbol and select ' Describe/Modify Symbol... ' from the pulldown menu.	The 'Symbol Description' window appears.	
25	Click on the ' Status Source: ' box and choose ' Object ' from the menu.		
26	Click on the ' OK ' button.		
27	In the window that you started OpenView from, type the following command: /usr/OV/contrib/NNM/setStatus/setStatus <loginid> Critical	The symbol called <loginid> will turn red.	
28	Click on and hold the right mouse button on the symbol and select ' Describe/Modify Symbol... ' from the pulldown menu.	The 'Symbol Description' window appears and the 'Status:' box says 'Critical'.	
29	Click on the ' OK ' button.		
30	Click on and hold the right mouse button on the symbol and select ' Delete Symbol ' from the pulldown menu.	An 'OpenView Windows WARNING' window appears	
31	Click on the ' OK ' button.	The icon that was selected is deleted from the EDF map	
32	Click on one of the symbols(devices) in the EDF window.	symbol becomes highlighted	
33	Select ' Monitor ' from the menu bar, followed by ' MIB Values ', followed by ' Browse MIB: SNMP... '.	The 'Browse MIB' window is displayed.	
34	Double click on ' private '		
35	Double click on ' enterprises '		
36	Double click on ' hp '		
37	Double click on ' nm '		
38	Click on ' snmp '		
39	Click on the ' Start Query ' button	The MIB Values are displayed.	
40	Click on the ' Close ' button		
41	Select ' Options ' from the menu bar, followed by ' Load/Unload MIBs: SNMP... '.	The 'MIB Load/Unload MIBs' window is displayed.	

42	Click on the 'Load' button.	The 'Load MIB from file' window appears listing the files in the default directory.	
43	Double click on the file you want to load from the scrollable list.	The file is now loaded in the 'Loaded MIBs' list.	
44	Select the same file from the 'Loaded MIBs' list and click on 'Unload' .		
45	Click on the 'OK' button.	The file has been unloaded.	
46	Click on the 'Close' button.		
47	Select 'Help' from the menu bar and browse the on line help features.		
48	Select 'Monitor' from the menu bar, followed by 'MIB Values' , followed by 'Graph Collected Data: SNMP' , followed by 'Selected Nodes' .	The 'Graph Collected Data' window is displayed showing data about the selected node.	
49	Select 'File' from the menu bar, followed by 'Exit' .		
50	Select 'Misc' from the menu bar, followed by 'Print Current Reports' .		
51	Click on the 'OK' button.	The reports will print.	
52	Exit OpenView and logoff to end test.		

5.3.17 Performance Management Test Procedures (TC014.005)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Enter <login id > to login to a DAAC workstation in the EDF.	'Enter Password: will be displayed	
2	Enter <password>	'host name{user name}' will be displayed	
3	Initialize HP OpenView by using the command < cd /usr/OV/bin > and entering the < ovw & > to start Hp openView graphical interface.	Hp Openview initializes	
4	Double click on the EDF icon	A submap consisting of the manage objects appear	
5	Click on one of the objects in the submap	object is highlighted	
6	Select from the OVW menu bar < Monitor -> MIB Values -> Browse MIB:SNMP > (Note: Click on the Down Tree button inorder to go to the next level.)	The Browse MIB window appears.	
7	In the Mib window browser click on < mgmt->mib-2->system->sysDescr >	sysDescr shall be highlighted	
8	Click on the < Start Query > button.	defintion/description of the object	
9	Double click on the next object in the submap	next object is highlighted	
10	Click on the< Reselect and the Start Query buttons > in the order given.	a defintion /description of the object is given	
11	Repeat steps 9 and 10 for the remaining objects in the submap.		
12	Select < Options -> Data Collection & Threshold :SNMP -> Selected objects ... >	Mib Data Collection window appears	
13	In the MIB DATA Collection window verify that they are a number of MIB obJects configured for Collection.	Display of performance metrics in the MIB Object ID column	
14	Click on < Diskutil > .	performance metrics is highlighted.	
15	In the MIB Object Collection Summary window click on the < ADD > button.	MIB Data Collection/Add collection for Disk % util window appears	
16	In the MIB Data Collection window enter of the sources from the EDF submap and click on the Add button.	The 'Source selected. hitc.com' appears in the list of collection services box.	

17	Click on <OK>	The selected object is added to the MIB Object collection summary.	
18	Click on the object added in the MIB Object Collection summary window . Double click on the <Show Data > button in the MIB Objects Configured for Collection window.	A window displaying the results of each polling interval of the object appears.	
19	Double click on <Graph -> View -> Statistics>	The following statistics for the configurable period is given: Minimum, Average, Maximum, last value.	
20	Repeat step 6		
21	Using the MIB Browser cClick on the following in the sequence given: mgmt-> MIB-2 -> interfaces -> if table -> ifentry (Note: click on the down tree button to go to the next level).	A list of network component are displayed. Such as operational status, type, speed, octets in/out, packets in/out, Discards in/out and errors in out.	
22	Using the < Start Query and the Deselect button > verify that data can be retrieved from each interface component listed in step 21.	data in Mib values box.	
23	Close all open windows except the Ir1 map and its EDF submap		
24	Click on <Misc -> Display current reports> .	Openview grapher window is displayed.	
25	Close the Openview graph	another grapher window is displayed	
26	Repeat step 25 until all collecting/performance/errors reports are completed. To close the window click on file and exit		
27	To print the reports select <MISC -> Print current reports >	reports are printed to the printer.	
28	All reports are log to a postscript file. To view the report change directory to /user/msdata/MSS/report/ ' month_year of the report ' and type ls to list the various report. Use 'pg ' follow by the name of the report selected from the list to view the contents of the report. Depress the 'Enter key' to view additional pages.		
29	End of test.		
	See test cases TC14.002 & TC 013.005 para. 3.13 & 3.11 for ESN-0740 requirement.		

5.3.18 Monitor/Control and Management Agent Test Procedures (TC014.006)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Login to "trevino.hitc.com" as an administrator. Type: rlogin trevino -l <admin. username> Type: <password>		
2	Set the display. Type: setenv DISPLAY <hostname>: 0.0		
3	Initialize the HP OpenView application. Type: ovw &	Verify overall map depiction of the network topology is accurately displayed.	
4	Demonstrate the ability to browse existing MIB objects and there descriptions. a) From the "Monitor" pull down menu, select "MIB Values" and then select "Browse MIB: SNMP..."		
5	Traverse the directory tree by selecting an entry in the "MIB Object ID" box and clicking on "Up Tree" or "Down Tree" button. Descriptions of each entry can be found by selecting an entry and clicking on the "Describe" button.		
6	Click on the "Close" button to close down the "Browse MIB" window.		
7	To demonstrate the communication between the Manager and Agent, select from the "Options" pull down menu "Data Collection & Thresholds: SNMP..."		
8	For the agent, set the threshold and rearm values as follows: a) Select the MIB object from the "MIB Objects Configured for Collection" box or demonstrate the ability to add MIB objects to the list.		The status of the MIB object needs to read "Collecting" in order for that object to be monitored. If the status reads "Suspended", then click on the "Resume" button and then on either the "Ok" or "Apply" button.
9	b) Select the target Agent from the "MIB Object Collection Summary" box or demonstrate the ability to add Agents to the list.		

10	c) Select “Store, Check Threshold” as the Collection Mode in the “Collection Details” box.		The Collection Mode of “Store, Check Thresholds” needs to be selected in order for values to be used.
11	d) Configure the polling interval to be 5 minutes.		
12	e) Set the “Threshold” and “Rearm” values in the “Collection Details” box to the desired values.		
13	f) Click on the “Replace” button to update the old threshold and rearm values with the new values.		
14	g) Reselect the Agent from the “MIB Object Collection Details” box.		
15	h) Configure the threshold event by clicking on the “Configure Threshold Event...” button.		
16	i) Select the “Event Name” with the same event number (i.e., trap number in the “Collection Details” box) for the threshold event.		
17	j) Click on the “Modify...” button.		
18	k) Configure the “Popup Notification (Optional)” field to display a message to the console when the threshold event is exceeded.		
19	l) Configure the “Command for Automatic Action (Optional)” field to send a mail message to the administrator.		
20	m) Click on the “Ok” button.		
21	n) Select the “Event Name” with the event number (i.e., (trap number + 1) in the “Collection Details” box) for the rearm event.		
22	o) Click on the “Modify...” button.		
23	p) Configure the “Popup Notification (Optional)” field to display a message to the console when the threshold event is exceeded.		
24	q) Configure the “Command for Automatic Action (Optional)” field to send a mail message to the administrator.		
25	r) Click on the “Ok” button.		
26	s) Click on the “Apply” or “Ok” button to replace the old information with the updated information.		

27	Force the Agent to exceed the threshold value set in step 9.	Verify that the Management Agent Service can receive ECS management traps/events and set messages from the Monitor/Control Service.. Verify that the trap mail message is reported back to the manager/administrator.	
28	Repeat steps 5 through 24 for other MIB objects.		
29	Demonstrate the ability to retrieve the results from the event log. a) Click on the category button of the configured event from the "Event Categories" window or click on the "All Events" button for all the logged events to view the event logs		
30	b) Click on the events specific for the test		
31	c) From the "File" pull down menu, click on "Save" then click on "Selected Events..."		
32	Enter in the complete path and filename.		
33	Click on the "Apply" button.		
34	Click on the "Cancel" button.		
35	From the "File" pull down menu, select the "Close" option.		
36	Demonstrate the functionality associated with the Monitor/Control Service to perform statistical analysis on the performance and fault data collected from the management Agent service. a) Select the desired nodes to be graphed		
37	b) From the "Monitor" pull down menu, select "MIB Values", then select "Graph Collected Data: SNMP...", then select "Selected Nodes".	Verify that all the collected data is available to be browsed using HP OpenView's graphing functions for the desired nodes.	
38	End of Test		

5.3.19 Problem Tracking Test Procedures (TS002.011)

Step No.	Step Description / Operator Action	Expected Results	Observations / Comments
1	Simulate a software problem in the configured AIT environment.		
2	login in to a workstation or Xterm terminal using ID and password		
3	Run the DDTs program by entering xddts(1)		
4	On the Defect page fill out the detail information about the defect as is requested.		
5	In the popup menu select the class and appropriate project and verify that a listing of the defect is in the database.		
6	Using the Modify Record command verify that information about the problem could be updated or modify.		
7	Use the cm.browse utility to verify that the problem exist.	QUALTRAK Browser will pop-up	
8	Enter BUGID (from step 4) <Return>	The Headline will appear	
9	Using xddts, click on SELECT from the Main Menu. Click on Complex Query & Sort.....	Defect Search Criteria Window will appear	
10	Verify using the database that you can sort on the following fields : Status = 'A' Submitter-id = 'your user-id' Severity = '1' Version = 'I&T' Project = 'Develop_Test'	A response will appear under the QUAL-TRAK Main Menu	
11	Generate a report from the sorted data.		
12	Click on Metrics from Main Menu Click on Management Reports...	Reporting Selection Criteria window will appear	

13	Click on Change Class (select IR-1) Click on Develop_Test for Projects Click on Select Unresolved for States Enter Start date Enter End date Select Monochrome Reports Select Three Line Summary of all Problems for Report Selection Select Print to File File Name : <i>ddts_probs</i>	Report with the name <i>ddts_probs</i> will be your home directory	
14	End of test		

5.3.20 Remote NCR Test Procedures (BC016.003)

Step No.	Step Description / Operator Action	Expected Results	Observations / Comments
1	Logon to a dps3sunedf (192.150.28.116)	successful login	
2	Enter: setenv DISPLAY ncd#.hitc.com:0.0	The environment DISPLAY is set for your machine.	This need not be done from server - dps3sunedf.
3	Enter: Mosaic &	The NCSA Mosaic: Document View will appear.	
4	From the Mosaic window, click on File and the click on Open URL.	The NCSA Mosaic: Open Document will appear - URL to Open.	
5	At URL to Open - enter: http://newsroom/sit/tee/teehome.html	Test Management Center URL appears.	
6	Single click on NCR Web Tool	The EDHS NCR Home Page appears.	This is the ECS Non-Conformance Report page.
7	Single click on Submit New NCR	Submit New Defect window appears with a lady bug logo.	
8	Enter: Submitter Name: Kenneth Campbell (click on next field)		
9	Enter: Phone Number: 301-925-0354 (click on next field)		
10	E-mail Address: kcampbel@eos.hitc.com		
11	Location: Click on HAIS button and click on GSFC	GSFC location is selected	
12	Submit to which Class: chris	'chris' is a class for the ECS DDTS Administrator.	This class is safe for submittal and will not show up on the database as an OPEN NCR.
13	Click on Continue	Identification Information window appears. The Submit to Which Project will be chrisproj.	
14	Enter: Software: test (click on next field)		
15	Enter: Version: test (click on next field)		

16	Enter: Summary of Defect: TC3.19 (click on next field)		
17	Enter: Defect Description: This is for TC3.19.		
18	Enter: Detection Method: Select system test		
19	Enter: Defect in Phase: Select functional test		
20	Enter: Test Program Name: Ir1		
21	Enter: Test System: dps3sunedf		
22	Enter: Version of OS: SunOS		
23	Enter: Need fixed by: YYMMDD		
24	Click Submit Defect Report	NCR Submission Acknowledgment. "Your NCR has bee sent to ddts@triton.hitc.com."	
25	Exit Mosaic	Exits Mosaic window.	
26	Exit dps3sunedf	Exits dps3sunedf.	

5.3.21 Hardware Monitoring Process Terminated Test Procedures (T04-01.01.06)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Enter <login id> on the EDF MSS server workstation	' Enter Password ' will be displayed	
2	Enter <password>	'host name {user name}' will be displayed	
3	Initialize HP OpenView by using the command <cd /usr/OV/bin/ovw > & then entering <OVW &> to start the Hp openview graphical interface.	HP OpenView will initialize	
4	To simulate a hardware failure disconnect the hardware component from the network. (i.e. printer)	EDF ICON turns yellow	
5	Double-click on the yellow Internet symbol.	EDF submap appears	
5	A network submap opens and display the various segments connected to it.		
6	If a red symbol is not visible double click on the yellow/blue until a red symbol appears	If symbol is red fault is isolated.	
7	Double click on the red workstation symbol a Node submap opens indication with one of the interfaces Red. The fault have been isolated to a single node.		
8	End of test		

5.3.22 Gateway/Router Monitoring Process Terminated Test Procedures (T04-01.01.09):

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Login to "trevino.hitc.com" as a valid user. Type: rlogin trevino.hitc.com -l <username> Type: <password>		
2	Set the display. Type: setenv DISPLAY <hostname>:0.0		
3	Initialize the HP OpenView application. Type: ovw &	Verify that a map depiction of the network topology is accurately displayed.	
4	Terminate the process that monitors a particular gateway/router activity.		Because there will not be processes monitoring HP OpenView in Ir1, this step is invalid for this release. Moreover, since the routers used for Ir1 are the V0 routers which are not allowed to be terminated, this test case cannot be executed.
5	Starting from the top level map, traverse down the Internet submaps following the YELLOW symbols until the "faulty" gateway/router is indicated by the color RED.	Verify that lower network submaps open and display the various segments connected to it.	
6	Double click on the RED gateway/router symbol.	Verify that a Node submap opens with one of the interfaces RED. The fault has been isolated to a single node.	
7	End of test		

5.3.23 Software Application Monitoring Process Termination Test Procedures (T04-01.01.12)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Logon to a DAAC workstation in the EDF as an administrator		
2	Initialize Hp Openview by using the command <cd /usr/OV/bin> and entering <ovw & > to start the Hp OpenView graphical interface.	a map is displayed showing the various DAACS.	
3	Double click on the Icon for the EDF DAAC	A submap is displayed	
4	using a different Hpterm logon to Nickalus using appropriate password and ID as an administrator	able to enter password and ID	
5	Go to the directory /usr/mssdata/MSS/bin on Nickalus and enter <testd & > to start the software application process.		
6	Wait one minute and then kill < Kill -9 'PID #'> the software application process.	After a period of approx. 2 minutes the Nickalus Icon in the submap turns blue	
7	Double click on the Nickalus ICON .	A submap shall appear	
8	Verify that the testd ICON is red..	Testd ICON is red	
9	Verify a Process Down event popup window for the problem appears.	Popup widow listing problem appears.	
9	Restart the testd application process by entering <testd &> and verify the ICON turns back to green.	Testd ICON turns green	
10	End of test		

5.3.24 Computer Monitoring Process Terminated Test Procedures (T04-01.01.18)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Login to "trevino.hitc.com" as a valid user. Type: rlogin trevino.hitc.com -l <username> Type: <password>		
2	Set the display. Type: setenv DISPLAY <hostname>: 0.0		
3	Initialize the HP OpenView application. Type: ovw &	Verify that a map depiction of the network topology is accurately displayed.	
4	Terminate the process that monitors a particular server.		Because there will not be processes monitoring HP OpenView in Ir1, this step is invalid for this release. Thus, the only way for this fault to occur is to physically create the fault. This test is therefore already covered in test case TC014.001 and TC014.002.
5	Starting from the top level map, traverse down the Internet submaps following the YELLOW symbols until the "faulty" server is indicated by the color RED.	Verify that lower network submaps open and display the various segments connected to it.	
6	Double click on the RED server symbol.	Verify that a Node submap opens with one of the interfaces RED. The fault has been isolated to a single node.	
7	End of test		

5.3.25 Operating System Monitoring Process Terminated Test Procedures (T04-01.01.20)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Login to "trevino.hitc.com" as a valid user. Type: rlogin trevino.hitc.com -l <username> Type: <password>		
2	Set the display. Type: setenv DISPLAY <hostname>: 0.0		
3	Initialize the HP OpenView application. Type: ovw &	Verify that a map depiction of the network topology is accurately displayed.	
4	Terminate the process that monitors a particular operating system.		Because there will not be processes monitoring HP OpenView in Ir1, this step is invalid for this release. Thus, the only way for this fault to occur is to physically create the fault. This test is therefore already covered in test case TC014.001.
5	Starting from the top level map, traverse down the Internet submaps following the YELLOW symbols until the "faulty" operating system is indicated by the color RED.	Verify that lower network submaps open and display the various segments connected to it.	
6	Double click on the RED operating system symbol.	Verify that a Node submap opens with one of the interfaces RED. The fault has been isolated to a single node.	
7	End of test		

5.3.26 Local Site Management/Security Policy and Procedures Test Procedures (T04-01.02.03)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Verify through inspection that the security management policies and procedures at all DAACs (LaRC, GSFC, EDC, and the EDF) include password management, operational security, data classification, access privileges, system hardware and software maintenance, and spare parts inventory guidelines.	Refer to Section 5 in DID611 (Instruction # Zi015-00) for specifics.	
2	Verify through inspection that the security section within all documents at all DAACs (LaRC, GSFC, EDC) are identical to the copy held at the EDF and are current.	Refer to Section 5 in DID611 (Instruction # Zi015-00) for specifics.	

5.3.27 Active DAAC ECS Administrator Account Test Procedures (T04-01.05.01)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Login to the DAAC system at the EDF with an invalid administrator account. Type: <invalid admin. username> Type: <password>	Verify access to the system is denied.	
2	Login to the DAAC system at the EDF using a valid administrator account. Type: <admin. username> Type: <password>	Verify that there are two EDF admin. accounts , one as a read-only monitoring account, and the other having full privilege (ROOT) to make OpenView system modifications as needed.	
3	Repeat step 2 for DAAC systems at LaRC, EDC, GSFC and MSFC.	Verify that the admin. accounts at each of the DAACs are read-only accounts.	

5.3.28 ECS Software Backup Maintained Test Procedures (T04-01.05.02)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Verify that the management policies and procedures manuals at each DAAC(LARC, GSFC, EDC, MSFC) request that a backup copy of the software is maintained at a separate physical location of the ECS.		
2	Verify through inspection that the copy exists and it is identical to that located at the EDF.		

5.4 System Administration Build (B1)

5.4.1 General DCE Test Procedures (BC008.001)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Login to css1hped as a standard user.	successful login	
2	Type dce_login Enter Principal Name: it_admin Enter Password: <it_admin password>	successful login	
3	Type cdsbrowser &	HP CDS Browser Window will appear	
4	Double click on directory ././lr1	The ././lr1 directory will show subdirectories: ././lr1/Gateway ././lr1/Ingest ././lr1/cell-profile	
5	Click on ACTION at the top of the window Click on CREATE ENTRY Click on CREATE DIRECTORY	Create Directory Box appears	
6	Enter ././lr1/test for a new sub-directory	Sub-directory ././lr1/test will be created	
7	Click on ACTION at the top of the window Click on CREATE ENTRY Click on CREATE OBJECT	HP CDS Browser - Create Object window appears (pop-up window)	
8	Enter Object Name : ././lr1/test/kc Class Name: RPC_Entry Class Version: 1	New object ././lr1/tester will be created as a RPC_Entry	
9	Double click on ././lr1/test/kc to SHOW DIRECTORY	HP CDS Browser - Attribute List will be displayed	
10	Click on ././lr1/test/kc Click on ACTION Click on DELETE ENTRY Click YES on Question Box	Question Box appears: Delete CDS Entry ././lr1/test/kc	

11	Click on ././lr1/test Click on ACTION Click on DELETE ENTRY Click YES on Question Box	Question Box appears: Delete CDS Entry ././lr1/test	
12	Enter: kdestroy <return>	This command, kdestroy, is needed to clean up DCE entries	
13	End test		

5.4.2 Network Management Test (BC002.004)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Login to a DAAC MSS Server workstation (HP) in the EDF as an administrator.		
2	Initialize the HP OpenView application : Type: cd /usr/OV/bin Type: ovw &	Verify overall map depiction of the network topology is accurately displayed.	
4	Double click on the “EDF” icon.	Verify map depicting the EDF configuration is accurately displayed.	
5	From the “Options” pull down menu, select “Data Collection & Thresholds: SNMP...”	A MIB Data Collection window will be displayed	
6	From the “ MIB Data Collection ” window, select a performance metric, such as "Disk%Util"	From the MIB Object Collection Summary box within the MIB Data Collection window verify that the PMAS provides a configurable number of thresholds for each performance metric	
7	From the MIB Object Collection Summary box within the MIB Data Collection window select the MIB Object	Collection Data box is highlighted	
8	Enter threshold and Rearm values in the collection Details box and click on Replace button Note: In order to find out what will be the proper values for threshold and rearm, you can click on the "show data" button from the MIB Data Collection window and base on the current value in the value column to determine what will be the proper value for your test.	The new values will appear in the MIB Object Collection Summary box	This shows that the EMC PMAS can create and send a list of suggested initial thresholds for each performance metric to the MSS site performance management application via CSS services and that the sites can receive it.
9	Reselect the MIB Object from the “MIB Object Collection Details” box.		
10	Configure the threshold event by clicking on the “Configure Threshold Event...” button.	Event Configuration Window will popup.	

11	Select the “ Event Name ” which has the same event number as the trap number defined in the “ Collection Details ” box for the threshold event.		
12	Click on the “ Modify... ” button.	The Modify Event window will popup	
13	Configure the “ Popup Notification (Optional) ” field to display a message to the console when the threshold event is exceeded.		
14	Click on the “ OK ” button.	The Modify Event window is disappeared	
15	Select the “ Event Name ” which has the event number as the (trap number + 1) in the “ Collection Details ” box for the rearm event.		
16	Configure the “ Popup Notification (Optional) ” field to display a message to the console when the rearm event is met.		
17	Click on the “ OK ” button.	The Modify Event window is disappeared	
18	Click on the “ Apply ” or “ Ok ” button from the Event Configuration window to replace the old information with the updated information.		
19	Exceed the limit specified in step 8 by storing as many large postscript and HDF files to the system storage device as possible without damaging any existing files on the system.	Verify that when the threshold is exceeded, the popup window shall display at the upper left corner	
20	Remove the files which got in step19 to bring the hard disk storage capacity below the rearm level.	Verify that when the rearm value is met, the popup window is displayed,	
21	Repeat steps 6 through 20 for other configured events such as ping_css1hpedf.	Verify that when threshold values are not exceeded for the above steps that they are no alarms or warnings.	
22	Close all windows and exit Openview. End of Test		

5.4.3 Fault Management Test Procedures (T04-01.02.01)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Enter <ovadmin> on the EDF MSS server workstation, mss1hped in the EDF Computer Center.	'Enter Password:' will be displayed	
2	Enter <password>	'host name{user name}' will be displayed	
3	Enter: /usr/OV/bin/ovw &	HP OpenView will initialize	Note the ' Event Categories ' window and the many different faults that are defined.
4	Double click on the EDF icon to bring up the EDF window.		Move the windows around so that the entire Ir1 and EDF maps are visible.
5	Select ' Options ' from the menu bar, followed by ' Topology/Status Polling : IP... '.	The 'Topology/Status Polling' window appears.	
6	Configure the polling interval by selecting the first, second and fifth buttons and putting ' 1s ' in the ' Configuration Polling Interval ' box.	The polling interval is set to one second.	
7	Disconnect a hardware device(e.g. computer, printer) from the network. Disconnect mss3hpedf , the HP Laser Printer next to mss1hped server.	The symbol of the device that was disconnected will turn red and the EDF icon in the Ir1 map will turn yellow.	
8	Click on Diagnose, Network Activity, Demand Poll	This initiates polling to mss3hpedf.	
9	Double click on the red device symbol.	Node submap opens with one of the interfaces Red.	The fault have been isolated to a single node.
10	Connect the hardware device back to the network.	The maps will return to their original state.	
11	Select File from menu bar, Save the file	/tmp/filename.save	
12	Click on the ' All Events ' box in the 'Event Categories' window.	The 'All Events Brower' window appears.	
13	Close 'All Events'		
14	Click on the dps3sunedf .	The dps3sunedf submap symbol becomes highlighted.	

15	Select 'Misc' from the menu bar, followed by 'Terminal Connect' , followed by 'Telnet (hpterm)' . Enter: (your userid) Enter: (your password)	A 'hpterm' window requesting the user to login is displayed on the terminal.	
16	Select 'Diagnose' from the menu bar, followed by 'Network Connectivity' , followed by 'IP/TCP/SNMP...' .	The 'Test All protocols' window is displayed with the following information: ICMP Echo < 1 ms; TCP connect = ok and SNMP Get = ok.	
17	Click on the 'Close' button.		
18	Select 'Diagnose' from the menu bar, followed by 'Network Connectivity' , followed by 'Demand Poll' .	A 'Demand Poll' window is displayed with a list of the poll results.	
19	Select 'Diagnose' from the menu bar, followed by 'Network Connectivity' , followed by 'Ping...' .	A 'Ping' window is displayed with data similar to the following: <64 bytes from 192.150.28.116:icmp_seq= varies, time =varies.	
20	Click on the 'Stop' button.		
21	Click on the 'Close' button.		
22	Select 'Monitor' from the menu bar, followed by 'Network Configuration' , followed by 'Services...' .	A 'Sevices' window is displayed with a listing of all of the available services.	
23	Click on the 'Close' button.		
24	Select 'Esc' from the menu bar, followed by 'Display Current Reports' .	The 'OpenView Grapher' window is displayed.	
25	Select 'File' from the menu bar, followed by 'Print...' .	The 'Print OpenView Grapher' window is displayed.	
26	Click on the 'Apply' button.	The graph prints out.	
27	Click on the 'Cancel' button.		
28	Select 'File' from the menu bar, followed by 'Save As...' .	The 'Save Data' window is displayed.	
29	Click on the 'Apply' button.	The graph is saved to disk.	
30	Click on the 'Cancel' button.		
31	Click on the 'Close' button.		
32	Exit from OpenView and end test		

5.4.4 Security Management Test Procedures (T04-01.02.02)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	In the EDF Computer Center: Login to “ mss1hped ” as System Administrator. Type: ovadmin Type: <password>	successful login	
2	Set the display. Type: setenv DISPLAY mss1hped.gsfc.nasa.gov:0.0		
3	Initialize the HP OpenView application. Type: /usr/OV/bin/ovw &	Verify that a map depiction of the network topology is accurately displayed.	This path is needed because the System Administrator account does not have the OpenView path in it's .cshrc file.
4	Double click on the available icons to verify that lower level submaps exist. 1) Ir1 Routers 2) EDF 3) LaRC 4) GSFC 5) EDC 6) MSFC	Verify that the lower level topologies include hosts, routers, network interface cards, bridges, gateways, operating systems, peripherals, databases and their status.	
5	Click Close for each window that appears		
6	Determine the operational state of all network components, hosts and peripherals.		
7	Double click on the EDF icon	EDF IP-Map appears	
8	Force an operational state change by terminating or disconnecting the mss3hpedf laser printer.		
9	Click on Diagnose-Network Connectivity-Demand Poll	EDF icon turns yellow, mss3hpedf printer turns red.	
10	Reconnect the cable on the mss3hpedf		
11	Click on Diagnose-Network Connectivity-Demand Poll	EDF icon turns green, mss3hpedf printer turns green.	
12	Click on All Events	All Events window appears.	

13	Highlight the area where the activities exist for mss3hpedf		
14	Demonstrate the ability to generate reports on an interactive and scheduled basis to the console, to a file, and to a printer.		
15	Click on File		
16	Click on Save	File name will appear in this format: /tmp/filename.save	All file names with .save will be in the /tmp directory
17	Click on Apply	File is written to the /tmp directory	
18	Click on Cancel	Exits from the Save window	
19	End of Test		

5.4.5 Access to GSFC Test Procedures (T01.02.02.02)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Logon to a workstation at the EDF DAAC.		
2	Start a script log file. Type: <i>script TC4_5.log</i>		
3	Remote logon to a workstation at the GSFC DAAC.	successful logon	
4	'Ping' the workstation at the EDF DAAC.	"host is alive" response is received.	
5	Print out the script log file.	script log indicates successful logon and also verifies the "ping" response from GSFC DAAC to EDF DAAC.	

5.4.6 Access to LaRC Test Procedures T01.02.02.03)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Logon to a workstation at the EDF DAAC.		
2	Start a script log file. Type: <i>script TC4_6.log</i>		
3	Remote logon to a workstation at theLaRC DAAC.	successful logon	
4	'Ping' the workstation at the EDF DAAC.	"host is alive" response is received.	
5	Print out the script log file.	script log indicates successful logon and also verifies the "ping" response from LaRC DAAC to EDF DAAC.	

5.4.7 Access to MSFC Test Procedures (T01.02.02.04)

Step No.	Step Description/Operator Action	Expected Results	Observations/Comments
1	Logon to a workstation at the EDF DAAC.		
2	Start a script log file. Type: <i>script TC4_7.log</i>		
3	Remote logon to a workstation at the MSFC DAAC.	successful logon	
4	'Ping' the workstation at the EDF DAAC.	"host is alive" response is received.	
5	Print out the script log file.	script log indicates successful logon and also verifies the "ping" response from MSFC DAAC to EDF DAAC.	

5.4.8 Internetworking Test Procedures (BC002.002)

Step No.	Step Description / Operator Action	Expected Results	Observations / Comments
1	Login to Host 1 - Ir1 css1hpedf machine in the main EDF Computer Room (192.150.28.114).	successful login	(for tests conducted in the EDF, local hosts will simulate external clients)
2	From the command line: setenv DISPLAY (IP Address to your machine)	environment setting in place	The environment setting for css1hpedf is set.
3	Rlogin to Host 2 - Ir1 dps3sunedf machine in the main EDF Computer Room (192.150.28.116).	successful login	
4	From the command line: setenv DISPLAY (IP Address to your machine)	environment setting in place	The environment setting for dps3sunedf is set.
5	Setup Network General Analyzer to listen on the Ethernet connection	successful setup	This is a very sensitive activity. There will be a need for someone to assist that is experienced with the Network General Analyzer.
6	Bring up another Xterm and from the command line" Enter: xhpcalc	calculator will appear	The calculator is need to convert the IP addresses of css1hpedf/dsp3sunedf into HEX characters for the Network General Analyzer.
7	The two IP Addresses convert to: o css1hpedf (192.150.28.114) = c0961c72 o dps3sunedf (192.150.28.116) = c0961c74	The Analyzer will ask for these parameters.	
8	From the command line on Host 2: Enter : ftp css1hpedf	ftp mode initialized on css1hpedf	
9	Hit enter and then enter password where prompted password:		
10	From the ftp mode: ftp> put sniffer	"sniffer" file is ftp'ed to 192.150.28.114	The Network General Analyzer is recording the activity.
11	From the command line on Host 1: Enter: ftp dps3sunedf	connected to dps3sunedf	
12	From the ftp line enter: ftp> get sniffer	ASCII Transfer completed	
13	Terminate ftp connection on both logins ftp> bye	ftp terminated	

14	Quit the xhpcalc and type in exit on the xterm window	xhpcalc and xterm window terminated	
15	View network analyzer packet capture for Ethernet transmission		The results from the test were saved to a ploppey and are in Mike Molinet's possession. The files are: TC4.8.ENS - setups for the test TC4.8.ENC - 367 frames
16	Complete test log / end test		